# SYLLOGE FUNGORUM

OMNIUM HUCUSQUE COGNITORUM

DIGESSIT

P. A. SACCARDO

VOL. XXIV

Sectio II

## SUPPLEMENTUM UNIVERSALE

Pars X

Pyrenomycetæ p. p., Discomycetæ, Appendix (Addenda ad vol. XXIII-XXIV)

CURANTE

ALEX. TROTTER

(Collab. P. A. et Dom. SACCARDO, G. B. TRAVERSO, A. TROTTER)

Fol. 46 — Pretium it. lib. aureis 63

ABELLINI

Die 25 Aprilis MCMXXVIII

Sumptibus Coheredum SACCARDO
TYPIS PERGOLA

Vendit extra Italiam R. Friedländer & Sohn, Berolini

Omnia jura sunt servata

Abellini, sumptibus Coheredum Saccardo (Typis Pergola).

## Fam. 5. Valsaceae Tul.

Cl. v. Höhnel (Ber. d. deutsch. bot. Ges. 35., 1917, p. 631) ex peritheciorum fabrica novum systema Diaporthearum condidit, quod genera complura Dothideacearum, Sphaerelloidearum, Melanconidarum, Melogrammarum, Gnomoniarum etc. (seu Hypocreacearum, Valsacearum, etc.) amplectit. Perithecia (Winterina Sacc. exceptum) omnino immersa, plerumque tenui-membranacea, pallida v. hyalina, raro crassa v. carbonacea. Periphyses plerumque nullae v. indistinctae. Ostiolo e depresso longe rostellato. Stromate nullo v. praesente, variabile, tunc parco tunc copioso, distincte limitato v. non. Asci et sporidia variabilia.

## I. Eu-Diaportheae v. H., l. c.

#### Sporidia non allantoidea

Ι,	Sporidia continua, hyalina, elongata	
	A. Fungi foliicoli	
	<ul> <li>a) Non stromatici centro rostrati</li> <li>b) Clypeo stromatico praediti, non rostrati.</li> <li>c) Stromate immersi, rostrati</li> </ul>	GNOMONIELLA Sacc. SPHAEROGNOMONIA Potebn MAMIANIELLA V. H.
	B. Fungi caulicoli v. ramicoli	
	<ul> <li>a) Stromate valsoideo</li> <li>b) Stromate eutypeo, saepe tantum lineari</li> <li>c) Stromate tuberculiformi, immerso, parum emergenti</li> </ul>	CRYPTOSPORELLA Sacc. DIAPORTHOPSIS Fabre MAZZANTIA Mont.
11.	Sporidia inaequaliter bilocularia, hyalina, e elongata fusoidea	
	A. Fungi foliicoli	
	<ul> <li>a) Stromate nullo</li> <li>α) Perithecia et rostrum erecti</li> <li>β) Perithecia profunde in:mersa, rostrum</li> </ul>	APIOGNOMONIA V. H.
	b) Perithecia stromate immersa	PLAGIOSTOMELLA V. H.
	<ul> <li>a) Rostrum breve; perithecia membranacea non carbonacea</li> <li>b) Rostrum longe emergens; perithecia</li> </ul>	Hypospila Fr.
	erassa, obscura subcarbonacea.  B. Fungi ramicoli	MAMIANIA Ces. et De N.
	Stromate valido, diatrypeoideo, emergente; perithecia prismatico-cylindracea, parallele	APIOPORTHE V. H.
	disposita . Syll. fung. XXIV (VII-1926)	45

III.	Sporidia	aequaliter	bi-raro	quadrilocularia	5	
	multi	guttulata,	elongato	-fusoidea		

## A. Stromate v. clypeo destituti

- a) Asci octospori
  - α) Perithecia superficialia, crassa, ruvida, immersa, lignicola v. corticola
  - 3) Perithecia immersa
    - \* Perithecia astoma, umbilicato-cupulato-immersa, margine pallidiora
    - \*\* Perithecia ostiolata rostrata
      - Perithecia erecta rostro centrali erecto praedita
        - . Sporidia bilocularia
        - .. Sporidia quadrilocularia
      - Perithecia profunde immersa, rostro profunde laterali.
- a) Asci multispori
  - α. Fungi foliicoli, sporidia bilocularia
  - β. Fungi ramicoli, sporidia 1.2 locularia

#### B. Stromate carentes

- a) Fungi foliicoli. Stromate monocarpidico, clypeo superiori et inferiori praedito; perithecia extus oxalato chalcico praedita.
- b) Fungi ramicoli, raro in foliis Coniferarum
   α. Sporidia bilocularia, 2-4 guttulata,
  - plerumque parva

    \* Stromate verruciformi, vivide e flavo
    rubro. Perithecia parallele disposita
  - \*\* Stromate non vivide colorato, valsoideo v. euportheoideo, quandoque e subnullo v. tantum lineari
  - Sporidia quadrilocularia magna, Stromate valsoideo

#### IV. Sporidia bilocularia, elongata, medio tenuiora bifusoidea

- A. Stromate nullo; fungi plerumque foliicoli; perithecia profunde immersa rostro breve laterali praedita; sporidia mox et facile disarticulata.
- B. Stromate praesenti; fungi ramicoli, sporidia distincte bifusoidea.

WINTERINA Sacc.

GNOMONINA V. H.

GNOMONIA Ces. et De N. GNOMONIOPSIS Berlese

PLAGIOSTOMA Fuck.

REHMIELLA Wint.
DITOPELLA De Not.

CHALCOSPHAERIA V. H ..

ENDOTHIA Fr.

DIAPORTHE Nitsch.

CALOSPORELLA Schr.

PLEUROCERAS Riess.

VIALABA Sace.

V. Spo	ridia filiformia v. cylindracea, longa	
A.	Stromate nullo; perithecia profunde	
	immersa, rostro laterali; fungi fo- liicoli; sporidia filiformia Ophiognomonia S	nec.
В.	Stromate monocarpidico, clauso; perithecia pallida; fungi foliicoli; sporidia filiformia	
	a) Contextu stromatico brunneo ; perithecia rostrata	rst.
C.	Stromate polycarpidico, valsoideo; fungi ramicoli; sporidia cylindra- cea, recta v. incurvata	

## II. Valseae v. H., l. c. p. 636 (non Auct.)

#### Sporidia allantoidea

A. Fructificatio secundaria phaeostil- bacea; rostro longe prominenti	
<ul><li>a) Stromate entypelloideo .</li><li>b) Stromate entypeoideo, saepe vix distincto;</li></ul>	SCOPTRIA Nitsch.
perithecia plerumque solitaria	PERONEUTYPA Berl.
B. Fructificatio ut supra nulla  a) Stromate plerumque valsoideo, parum evoluto, a cortice parum distincto; asci	
4-8 spori	VALSA Fr. p. p.
b) Stromate valsoideo, bene evoluto, stratu	
basali proprio praedito	
α. Asci 4-8 spori	LEUCOSTOMA Nitsch. v. H.
β. Asei polyspori .	VALSELLA Fuck.

Species typicae ad singula genera pertinentia, sec. v. Höhnel:

Apiognomonia veneta (Sacc., Laestadia) v. H. Apioporthe anomala (Peck, Diatrype) v. H. Calosporella platanoides (Pers., Sphaeria) v. H. Ceuthocarpon populinum (Pers., Xyloma) Karst. Chalchosphaeria Pustula (Pers., Sphaeria) v. H.

Cryptospora suffusa (Fr., Sphaeria) Tul. Cryptosporella hypodermia (Fr., Sphaeria) Sacc. Diaporthe Eres Nitsch, etc. Diaporthopsis nigrella (Awld., Leptosphaeria) Fabre Ditonella ditona (Fr., Sphaeria) v. H. Endothia radicalis (Schw., Sphaeria) Fr. Guomonia vulgaris Ces. et De Not. (Sphaeria Guomonia Tode) Gnomoniella tubaeformis (Tode, Sphaeria) Sacc. Gnomonina alnea (Fr., Sphaeria) v. H. Gnomoniopsis Chamaemori (Fr., Sphaeria) Berl. Hupospila bifrons (D.C., Xyloma) Fr. Leucostoma Massariana (De Not., Valsa) v. H. Mamiania fimbriata (Pers., Sphaeria Ces. et De Not.) Mamianiella Coruli (Batsch, Sphaeria) v. H. Mazzantia Galii (Fr., Sphaeria) Mont. Ophiognomonia procumbens (Fuck., Linospora) Berl. Peroneutupa corniculata (Ehrh., Sphaeria) Berl. Phoma Capreae (D. C., Sphaeria) v. H. Plagiostoma Euphorbiae (Fuck.) Plagiostomella petiolicola (Fuck., Plagiostoma) v. II. Pleuroceras Cryptoderis (Lév., Sphaeria) v. II. Rehmiella alpina Wint. Scontria isariphora Nitsch. Sphaerognomonia carpinea (Fr., Sphaeria) Poteb. Valsa ambiens (Pers., Sphaeria) Fr. Valsella Salicis Fuck. Vialaea insculpta Sacc.

## Sect. 1. Allantosporae

## CORONOPHORA Fuck. - Syll. I p. 103, XIV p. 480, XVI p. 420.

Winterina tuberculifera (E. et Ev., Winteria) Sacc.

1. Coronophora moravica Petrak, Fl. Boh. et Mor. exsice., v. II., Ser. I : Pilze n. 677, Ann. Mycol. XII, 1914, p. 476.— Peritheciis singularibus v. saepe aggregatis sub epidermide tumidula nidulantibus. globosis, nigris, ostiolo breviter conico pertusis, 300-400 μ diam.; ascis multisporis, anguste clavatis, apice rotundatis obtusis. 100-160 × 12-15 (pars sporifera 76-115 μ) in pedicellum 24-45 μ longum paullatim attenuatis, medio crassissimis, valde caducis: sporidiis rectis v. saepe plus minusve curvatis, cylindraecis utrinque rotundatis, minutissimis, 3-5 × 0,5-1, hyalinis; paraphysibus numerosis, filiformibus, ascis subaequilongis v. parum longioribus.

Hab. in ramis emortuis Pruni spinosae (Rosaceae). prope

Welka non procul a Mähr. Weisskirchen, Moravia or. — Cor. angustatae proxima sed peritheciis et ascis satis distincta.

CALOSPHAERIA Tul. — Syll. I p. 95, IX p. 477, XI p. 272, XIV p. 479, XVI p. 419, XVII p. 561; XXII p. 352.

Calosphaeria sulcata Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 5623
 P. III, 1917, p. 222. — Peritheciis circa 0,6 mm. diam., globosis, gregibus parvis basi corticis immersis; ostiolis ad 1-2 mm. long., 0,1 mm. diam., supra incrassatis et sulcis quatuor ornatis, convergentibus, emergentibus; ascis octosporis, infra attenuatis, 28-36 × 6-8, parte sporifera, 18-22 μ; paraphysibus longissimis; sporis cylindraceis, curvis, viridi-hyalinis, 6-7 × 1,5.

Hab. in ramis emortuis Heve ae brasiliensis (Euphorbiaceae), Peradeniya, Ceylon.

2. Calosphaeria ulmicola v. Höhnel, Ber. d. deutsch. bot. Ges., 35., 1917, 5624 p. 252 (nom. nud.); Ann. Mycol. 16., 1918, p. 142. — Peritheciis carbonaceis, sphaeroideis, 300 μ circ. cr., parce gregariis, subperidermicis, rostro 320 × 70 terminatis, extus hyphis atro-brunneis 6.7 μ cr. tectis; ascis numerosis apice obtusis infra angustatis octosporis, sessilibus, fasciculatis, paraphysatis, 20-22 × 4-5,5; sporidiis distichis, allantoideis, hyalinis, 6 × 1,5.

Hab. in ramis emortuis Ulmi campestris (Ulmaceae), Presbaum, Austria — Cal. ciliatulae (Fries) proxima.

3. Calosphaeria pachydermata Petch, Ann. R. Bot. Gard. Peradeniya, 5625 v. VI, P. III, 1917, p. 222. — Peritheciis ad 1 mm. diam. carbonaceis, pariete crasso ad 0,15 mm., cortice immersis, in greges ad 5 mm. diam. confluentibus, interdum distichis, ostiolis longis, cylin. draceis, aequalibus, ad 2 mm. alt., 0,1 mm. diam., fasciculatim emergentibus, stipitibus sterilibus intermixtis; ascis clavatis, octosporis, infra attenuatis, 25 × 4-5; sporis subcylindraceis, curvis, viridi-hyalinis, 4-5 × 1,5-2.

Hab. truncum emortuum, Henaratgoda, Ceylon.

EROSTELLA (Sacc.) Trav.—Syll. I p. 101 ut subg., XXII p. 353.

1. Erostella inconspicua (Rehm) Sacc., Calosphaeria inc. Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2213.—Peritheciis sub cortice immutato 5-10 in acervulos valsiformes collectis, globulosis, corticem elevantibus, dein plerumque rimose disrumpentibus, ostiolo minimo vix conspicuo, nigris, glabris, 100 μ latis; ascis copiosissimis, sessilibus, clavatis, octosporis?, apara-

5622

physatis, 20-25 \* 9; sporidiis distichis, allantoideis, vix curvatulis, hyalinis,  $8\cdot 10 * 2$ .

Hab. in Gigantochloa Scribneriana (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).— Difficillima species; stroma nullum adesse videtur.

QUATERNARIA Tul. - Syll. I p. 106, IX p. 459, XVI p. 422, XXII p. 353.

1. Quaternaria moravica Sacc. et Petr., Ann. Mycol. XII, 1914, p. 288.— 5 Peritheciis late effusis sed stromate subnullo exceptis, nunc solitariis nunc 2-4 confluentibus, majusculis, globosis, nigris, intus nitidis, 1 min. diam., brevicollibus, teetis sed elevato-pustulatis, ostiolis erumpentibus, obtuse papillatis, atro-nitidulis, subintegris; ascis tereti-clavatis, apice obtusis, in stipitem filiformem productis, 180-200 × 12-14 (p. sp. eirc. 100 μ longa), octosporis; sporidiis distichis, allantoideis, utrinque rotundatis, curvis, majusculis, 20-28 × 5-6, atro-olivaceis.

Hab, in ramis corticatis emortuis Tiliae (Tiliaceae), Weisskirchen, Moravia (F. РЕТКАК). — Pulchra species a congeneribus distincta.

- VALSA Fr. Syll. I p. 108, IX p. 449, XI p. 273, XIV p. 481, XVI p. 422, XVII p. 562, XXII p. 354.
- Valsa ambiens (Pers.) Fr. Syll. I. p. 131. Var. Shepherdiae Sacc., a Notae Mycol. XXII (R. Acc. Pad. 1917 p. 166). A typo dignoscitur disco minori, atro, inaequali; ascis 28-30 \* 11-12, octosporis; sporidiis allantoideis, 16-19 \* 4-4,3, hyalinis.

Hab. in ramulis emortuis Shepherdiae argenteae, pr. Almont, — fm. octospora Sacc., Nuovo Giorn. bot. it. v. XXVII, 1920, p. 78. — Hab. in ramis morientibus Populi tremuloidis, Spokane, Washington, Amer. bor. (Vernon Simmons). — f. alnicola Peyronel, Bull. Soc. Bot. it. 1918, p. 19.— A typo differt sporidis, in ascis octosporis, majoribus, nempe 22-28, interdum usque ad 30, × 4,5-6; ascis octosporis tantum visis, 65-70-80 × 14-15. — Hab. in ramulis terminalibus Alni viridis, La Rurco, Pedemontium, Italia bor., socio stato pyenidico Cytospora ambiens. — f. Elacagni Rehm, Ascom. exsice. n. 2146; v. Höhnel, Ann. Mycol. 16., 1918, p. 217. — Ascis 60-74 × 7-9, sporidis plerumque 16 × 3,5. — Hab. in ramulis Elacagni argenteae, Kulm, N. Dakota, Amer. bor. (I. F. Brenkle).

2. Valsa saccharina Rehm, Ascomye. Exsice. fase. 51 n. 2025; Ann. 5629 Mycol. X, 1912, p. 540.— Euvalsa.—Stromatibus cortici interiori haud mutatae innatis, primitus solitariis, cm. 2 mm. lat., dein longitudinaliter coacervatis, epidermidem in striis plus minusve perpendiculariter parallelis, 5 cm. long. perrumpentibus ibique disculos atros seriatos denudantibus; peritheciis 10-15 orbiculariter monostiche congregatis, 0,15 mm. latis, atris, glabris, globosis, collis in disculum atrum, planum, c. 0,3 mm. lat. confluentibus ibique coalitis, papillulis minutissimis hemisphaericis prominentibus; ascis clavatis, 30-35 × 8-9, octosporis; sporis allantoideis, hyalinis, 10-14 × 2,5-3, 2-3-stichis; paraphysibus filiformibus.

Hab. in Acere saccharino (Aceraceae), prope London Ont., Canada, Amer. bor. (DEARNESS).

3. Valsa clavigera Dearn. et Barth., Mycologia, 1917, p.345. — Euvalsa. 5630 Stromatibus corticalibus, cum cortice secedentibus sed areas decoloratas non relinquentibus, dense gregariis v. subseriatis, pustulatis, hemisphaericis 0,7-1,5 mm.; peritheciis nigris, 5-15, plerumque 8-11 in quoque stromate, sub epidermide circinatis, globosis, 0,3-0,4 mm. diam., ostiolis clavatis, 0,5-0,7 mm. long. 180  $\mu$  cr., confertis et discum pallidum plerumque oblitterantibus; ascis e subgloboso fusoideis 27-40  $\mu$  long.; sporidiis conglobatis, v. oblique distichis, allantoideis,  $9 \approx 2,5$ .

Hab. in ramis emortuis Schizonoti discoloris (Asclepiadaceae), Bremerton Wash., Amer. bor.— In Acere macrophyllo (Aceraceae), ibidem, videtur hujus speciei forma paullo major.

4. Valsa decorticans (Fr.) Nke. — Sacc. Syll. I p. 123. — var. circassica 5631 Rehm, Ascom. exsicc. fasc. 47, n. 1914; Ann. Mycol. IX, 1911, p. 4.— Ascis longe angusteque pedunculatis 200 × 3, parte spor. 45 × 8, 4-8-sporis; sporidis cylindraceis rectis v. curvulis, flavidulis, 9-14 × 2,5-3; paraphysibus longis, filiformibus.

Hab. in ramis Carpini Betuli (Betulaceae), Krasnaja Poliana, Circassiae merid., Caucasiae (SEREBRIANIKOW).

5. Valsa Symphoricarpi Rehm, Ann. Mycol. IX, 1911, p. 365.— Euvalsa. 5632 Stromata innata, lentiformiter peridermium elevantia, demum dirrumpentia, in cortice interiore haud mutata, vix conspicua, linea nigra c. 2 mm. diam. circumscripta nidulantia; perithecia globulosa, 0,3 mm. diam. circinatim 8-12, monosticha, collis tenuissimis medio confluentibus et ostiolis in disculum parvulum coalitis, per peridermium prorumpentibus, primitus vix conspicuis hemiglobosis,

mm. cr.), nigris; pycnidiis in centro stromatis profunde immersis, subphialaeformibus, ostiolo canaliculato prominenti, 80-200  $\mu$  cr., praeditis; conidiis cirrum efformantibus cylindraceis v. allantoideis, utrinque obtusis 7-10  $\times$  1-1,5, hyalinis, plasmate homogeneo praeditis; peritheciis circa pycnidia circinnatim dispositis, phyalaeformibus, collo longo praeditis, nigris magnitudine variabilibus, 100-250  $\mu$  diam.; ascis numerosis, clavatis, saepe pedicellatis, 20-30  $\times$  5-8, hyalinis, octosporis, aparaphysatis; sporis cylindraceis, curvulis, continuis, hyalinis, eguttulatis, 8  $\times$  1,5.

Hab. in ramis Piri Mali (Rosaceae), cui valde noxia et morbum « Furanbyô » dicto producens, Honshû et Hokkaidô boreali, Japonia.

15. Valsa leucostoma (Pers.) Fr.— Sacc., Syll. I p. 139.— Var. Rosarum Sacc., Ann. Mycol. XI, 1913, p. 558.— A typo vix differt discopaullo minore, ascis sporidiisque quoque paullo minoribus; ascis 42-44 × 6,5-7; sporidiis 11 × 2,5, intus nubilosis, hyalinis. Simul adest Cytospora; sporulis 4-6 × 1.

Hab. in ramis corticatis emortuis Rosae caninae (Rosaceae), Weisskirchen, Moraviae (Petrak) — f. cincta Rolfs, Exper. Station Records 24., 1907, p. 450; Van der Byl, South Africa Journ. of Sc. 12., 1915, p. 546 — var. rubescens Rolfs, l. c. — Hab. in ramis exsiccatis Pruni Cerasi (Rosaceae), in America bor.

16. Valsa japonica Miyabe et Hemmi, Journ. Coll. of Agric. Imper. 56 Univ. Sapporo, v. VII, Pt. 4., p. 296, tab. VII-X (1916-1917), v. VIII (1918-1921).—Euvalsa.— Stromatibus sparsis primum immersis dein cortice pustulatim erumpentibus, ostiolatis, contextu myceliali, 3.5 mm. long.; peritheciis immersis subglobosis longe colliculosis, arcte concentrice dispositis, 15-40 in quoque stromate, 350-580 µ diam.; ascis cylindraceis raro clavatis, subsessilibus v. breviter pedicellatis, 60-96. \* 8,8-16, hyalinis, octosporis, demum evanescentibus: sporis plerumque biseriatis, quandoque irregulariter dispositis, allantoideis et utrinque rotundatis, fere hyalinis, curvulis, 10-28 » 7,2, plerumque 18-22 \* 4-4,8. - Status pycnidicus (Cytospora?): stromatibus sparsis, corticem primum elevantibus dein erumpentibus, conoideis v. verruciformibus, 2,2 mm. circ. latis, pluriloculatis; sporulis hyalinis, cylindraceis, utrinque rotundatis, plerumque curvulis,  $3,50-15,75 \times 1-2,63$ , plerumque  $7-8,75 \times 1,4-1,75$ , udis cirrum rubescenti efformantibus, basidiis, hyalinis, simplicibus v. ramosis, 14.28 \* 1,75.2,1.

Hab. in ramis Pruni yedoensis (Rosaceae), quos valde

necat, pluribus locis Japoniae.

17. Valsa uralensis Naoumoff, Champ. Oural. I (1915) p. 23 t. I f. 9 a, 5644 b.—Euvalsa.— Stromatibus sparsis, minimis, 1100  $\mu$  diam., cortice nidulantibus, dein prominentibus, ex 4-5 peritheciis 400  $\approx$  270, elongatis circinantibus compositis; disco minuto, fusco-grisco, subcirculari; ostiolis non emergentibus, nigris; ascis fusoideis, pedicellatis, octosporis,  $36.43 \approx 7.3$ ; sporidiis allantoideis, hyalinis, 8.7- $10 \approx 2.2.2.2$ .

Hab. in ramis emorientibus Salicis nigricantis (Salicaceae), Perm, Ural, Rossia.

18. Valsa Paulowniae Miyabe et Hemmi, Botan. Mag. Tokyo, v. XXX, 5645 n. 312, 4 fig. (1916). — Euvalsa. Stromatibus gregariis, cortice nidulantibus, dein erumpentibus, conico-verruciformibus, nigricantibus, subcoriaceis, intus virescenti-brunneis, 2·2,5 mm. diam., 1·2 mm. alt.; peritheciis immersis, subglobosis, dense concentrice dispositis, circ. 15 in quoque stromate, 150·300 μ diam., in ostiola nigra elongata extantia desinentibus; ascis tereti-clavatis subsessilibus aparaphysatis, 8·sporis, 32·52 × 8·10, saepius 44 × 8,5; sporidiis distichis, interdum inordinatis, allantoideis, utrinque rotundatis, hyalinis, 10·18 × 2·4, saepius 14·16 × 3,2. — Pycnidiis: stromate innato-erumpente, irregulariter phialiformi, intus uniloculariloculis globoso-napiformibus, 1,5 mm. lato; sporulis allantoideis 4,3·5 × 1,4 hyalinis in cirrum viridulum expulsis.

Hab. in ramis corticatis morientibus Paulowniae tomentosae (Scrophulariaceae), prov. Iburi, Ishikari, Mutsu, Japoniae.—Fungillus ut noxius habetur.

Valsa Glandulosae Cooke — Syll. 1 p. 112 — Sacc., Notae Myc. XXII 5646
 (Acc. Pad. 1917, p. 158).

Hab, in ramis corticatis crassioribus A i l a n t i g l a n d u l o s a e (Simarubaceae), Rigny-sur-Arroux, Gallia (FLAGEOLET). — Asci fusoidei  $22\cdot24 \times 3.5\cdot4$ ; sporidia perfecte hyalina allantoidea, 2-guttulata,  $4.7\cdot6 \times 1.8$ . Profecto ex errore typ., cl. Cooke indicat ascos crassos  $10~\mu$  pro 4.

20. Valsa Corchori Syd. et Butl., Ann. Mycol. IX, 1911, p. 412. — Eu-5647 valsa. — Stromatibus aeque sparsis, minutis, ca. 1 mm. diam., in cortice nidulantibus; peritheciis 5-12 in quoque stromate, monostichis, minutis, angulato-globosis, collo brevi; ostiolis crassiusculis, cylindraceo-truncatis, atris, erumpentibus, longis, ca. <sup>1</sup>/<sub>3</sub> mm. long.; ascis clavatis, sessilibus, octosporis, p. sp., 15-20 × 3,5-5; sporidiis allantoideis, hyalinis, 5-7 × 1,5-2.

Hab. in ramis Corchori sp. (Tiliaceae), Poona, Indiae or. (Н. М. Сніввек).

21. Valsa proximella Naoumoff, Champ. Oural. I (1915) p. 22 t. I f. 8 a. b.; e.—Euvalsa. Stromatibus sparsis, cortice nidulantibus, erumpentibus 1300 μ diam., ex 4-6 peritheciis subsphaeroideis, 340 × 250 circinantibus compositis; disco minuto circulari, griseo, ostiolis non extantibus, nigris; ascis clavatis v. fusoideis, truncatis, pedicellatis, octosporis, 66 × 9; sporidiis distichis 10 × 2, allantoideis, hyalinis.

Hab. in ramis emortuis Tiliae cordatae (Tiliaceae), Perm, Ural, Rossia. — Valsae ambienti, differt vero sporidiis minoribus, aseis pedicellatis etc.

VALSELLA Fuck. — Syll. I p. 158, IX p. 464, XI p. 275, XVII p. 567, XXII p. 358.

Valsella Kirschsteiniana Jaap, Verh. Bot. Ver. Prov. Brandenb. 57. (1915) p. 14.— Stromatibus gregariis, ramulos saepe per latas strias tegentibus, sed non confluentibus, corticem pustulatim inflantibus, 1·1,5 mm. latis, disco minuto, circulari, albo-griseo, ob ostiola nigro-punctulato; peritheciis globosis, 2-5 in quoque stromate, ostiolis confluentibus disco haud emergentibus; ascis longe clavatis, 40-50 \* 5 6, polysporis; sporidiis cylindraceis, leniter curvulis, hyalinis, 3-7 \* 1 guttula polari subindistincta praeditis.

Hab. in truncis et ramis exsiccatis Salicis auritae (Salicaceae), prope Triglitz in Prignitz, Germania. — Matricem cyaneo-atram reddit.

EUTYPELLA (Nits.) Sacc. — Syll. I p. 145, IX p. 460, XI p. 274, XIV p. 484, XVI p. 423, XVII p. 564, XXII p. 356.

1. Eutypella Anonae Torrend, Broteria, ser. Bot. IX (1913) p. 171, fig. 5.— Pseudostromatibus erumpentibus, peridermio superne rupto cinctis, pulvinato-hemisphaericis, superne albicantibus, intus alboprainosis; peritheciis in quoque acervulo 4-7, globosis, <sup>1</sup>/<sub>4</sub> mm. diam., collis subnullis, ostiolis convexis vix prominulis; ascis cylindraceo-clavatis, longe pedicellatis, 70-100 × 6-8, p. sp. 30-40 μ longa; sporidiis inordinate distichis, allantoideis, dilute ochraceis, 8-10 × 3-4.

Hab. in ramis Anonae Cherimoliae (Anonaceae), Funchal, ins. Madera (BARRETO).

2. Eutypella cerviculata (Fr.) Sacc. — Syll. I p. 146. — f. Carpini Rehm.

Hab. in Carpino caroliniana (Betulaceae), London Ont., Canada (DEARNESS).

3. Eutypella kochiana Rehm, Ann. Mycol. XI, 1913, p. 400. — Stroma 5652 in ligni superficie effusum, nigrum, acervulos valsiformes cortici interiori immutato innatos, orbiculares, 1-2 mm. lat. ambiens. Perithecia acervulatim collecta 5-6, globulosa, 0,15 mm. diam., ostiolis in disculum hemisphaericum nigrum collectis, prominentibus, demum cylindraceis, subsulcatis, 0,3 mm. longis. Asci subclavati, longe stipitati, p. sporif. 20-25 × 5, 8-spori. Sporae allantoideae, 5-6 × 2, hyalinae. Stroma acervulorum primitus cortici innatum, dein in rimis corticis sensim prorumpens, demum acervulos plane denudatos, atros.

Hab. ad Kochia e spec. ramulos (Chenopodiaceae), Tiffis, hortus botanicus, Caucasia. (Newodowski). — Eutypellae Sorbi proxima, sed magnitudine multo minor.

4. Eutypella Cheirolophi Maire, Bull. Soc. H. N. de l'Afr. du Nord, 5653 1917, p. 166. — Stromate peridermate immerso, usque in superficiem ligni vix atratam extenso, valseo, ex peridermate atrato imprimis constituto, saepius partim nigro-marginato partim immarginato, erumpenti; parte stromatis erumpenti rugosa, ostiolis parum prominulis, esulcatis praedita; peritheciis 1-8 stromate immersis, nigris, subcircinantibus, v. inordinatis, erectis, 500-600 × 300-400, ostiolo incluso obpiriformibus, ventre subgloboso v. verticaliter ellipsoideo ostiolis externis obliquis; ascis aparaphysatis, 8-sporis, clavatis, longe pedicellatis, 90-110 × 5-6 (pedicello 50-60 μ longo incluso); sporidiis dilutissime brunneolis, subdistichis, allantoideis, levibus, 7-9 × 2-2,5.

Hab. in caulibus Centaureae sempervirentis (Compositae), in Mauretania, Afr. bor. — Hie ad Quaternariam, hine ad Eut. orthosticham et E. Atropae nutans.

5. Eutypella praeandina Speg., Mycet. Argent. VI, Anal. Mns. Nac. 5654 Buenos Aires XXIII p. 48 (1912). — Acervulis sparsis valsiformibus, hemisphaerico-subconoideis, 1-2 mm. diam., primo tectis dein, cortice secesso, nudatis atque ligno infuscato basi insculptis; peritheciis stromate monostiche immersis, paucis, subcarbonaceis, atris, muco subchlorino farctis, ostiolis fasciculatis, ad apicem obtusum scrupulosum usque connatis; ascis numerosis, fusoideis, utrinque valide attenuatis, antice rostratis, p. sp. 30 × 3-4, basi in pedicellum gracilem 30-40 × 1-1,5 productis, aparaphysatis; sporidiis distichis, cylindraceo-allantoideis, leniter curvatis, utrinque minute guttulatis, hyalinis, 6 × 1,5.

Hab. in ramis emortuis C h u q u i r a g u a e e r i n a c e a e (Compositae), in collinis circa Potrerillos prope Mendoza, Argentina.

6. Eutypella Androssowii Rehm, Ann. Mycol. IX, 1911, p. 370. — Stromatibus ramulum ambientibus, in cortice intus dilute fusce denigrata disperse innatis, lentiformibus, applanatis, extus nigris, intus nigricantibus, modo disculo atro, in medio stromatis 0,3-0,5 mm. lato, ostiolis congregatis formato prominentibus, demum cortice albescente circumscissa liberis, sed peridermio albido circa disculum arcte adhaerente tectis, orbicularibus, corneis, 0,5-2 mm. diam.; peritheciis monostiche innatis, c. 12, globulosis, collis filiformibus versus disculum convergentibus ibique ostiolis ovato-globosis, vix sulcatis, interdum 0,2-0,4 mm. elongatis prominentibus; ascis fusiformibus, in stipitem tenuem elongatis, p. sporif. 20-25 × 5, octosporis; sporis allantoideis, subcurvatis, hyalinis, 5-7 × 1,5; paraphysibus sparsis, longis, 2-5 μ lat.

Hab. in ramis Elaeagni angustifoliae (Elaeagnaceae), Bolschie Barsuki prope Tschelnae Prov. Turgaj, Turkestan (Androssow). — Fungus valde eximius ad typum Eut. stellulatae pertinens, plane diversus ab Eutypella tetraspora Berl.

7. Eutypella Heveae H. S. Yates, The Philipp. Journ. of Sc., Bot., 13., 5 1918, p. 378. — Stromatibus sparsis, ramos aequaliter densiusculeque obtegentibus, 0,5-0,75 mm. diam., per corticem erumpentibus; ostiolis per peridermium arcte adhaerens erumpentibus, nigris; peritheciis in quoque acervulo 4-8, globulosis, 300-350 μ diam.; collis elongatis (200-250 μ longis); ostiolis crassis, plerumque 4-sulcatis; ascis oblongo-clavatis, longe pedicellatis, parte sporifera 30-35 μ longis, 5 μ latis, octosporis; sporidiis distichis vel congestis, allantoideis, leviter curvulis, lutescentibus, 7-8 × 2-2,5.

Hab. in ramis emortuis Heveae brasiliensis (Euphorbiaceae), Isabela, Brasilan, Ins. Philipp. (YATES).

8. Eutypella Malloti Rehm, Ascom. Philippin. VIII, in Leaflt. of Philipp. Bot. VIII, 1916, p. 2955. — Stroma crustaceum nigrum, sub cortice serpens circa peritheciorum acervulos elevatum; acervuli gregarii tumiduli, 1-2 mm. lati, corticem immutatum protuberantia et prorumpentes; perithecia in quoque acervulo 5-10, globulosa 0,4 mm. lata, collis convergentibus praedita, ostiolis hemisphaericis obtusis distincte tenuiter striatis. Sporae allantoideae curvulae, pallide melleae, 5-8 × 2 in ascis clavatis, tenuiter stipitatis 40 × 5-6, 8-sporis; paraphyses nullae.

Hab. Mallotum philippinensem (Euphorbiaceae), Los

Baños, Ins. Philipp. (C. F. Baker). — Eut. plagiae (B. et C.) Berl. proxima.

9. Eutypella lineolata Rehm, Ascom. Philippin. VIII, in Leaflt, of Philipp. Bot. VIII, 1916, p. 2955. — Stroma effusum, corticale epidermide tectum a strata superiore corticis mutato formatum, linea nigra per lignum excurrente notatum, circa acervulos peritheciorum vix elevatum nigrum. Acervuli gregarii longitudinaliter et parallele seriati per epidermidem vix elevatum prorumpentia, 0,5-1 mm. longi; perithecia 10 monostiche aggregata, globulosa 0,4 mm. lata, collis fasciculatim erumpentibus, cylindraceis, teretibus, 0,5 mm. longis, ostiolis integris; asci ovoidei, sessiles, 10 × 5, 8-spori; sporae allantoideae, 4-5 × 1,5, hyalinae.

Hab. Mallotum philippinensem (Euphorbiaceae), Los Baños, Ins. Philipp. (C. F. BAKER).

Eutypella bambusina Penz. et Sacc. — Syll. XIV p. 486 — var. 5659
 sulphurea Rehm, Ascom. Philipp. IV p. 1942 (1913); Rick, Exs. Austro-Amer. n. 87. — Differt stromatibus 1 cm. long. intus sulphureo-flavidis.

Hab. ad culmos Bambusae blumeanae (Graminaceae), emortuos, Los Baños, Laguna in ins. Philippinis (C. F. BAKER).

11. Eutypella leptocarpa Sacc., Ann. Mycol. 13., 1915, p. 134. — Stromatibus gregariis, depresso-conoideis, 2-3 mm. diam. intus albido-furfuraceis; peritheciis numerosis saepius bi-stratosis, nigris, globulosis, minutis, collis plus minus longis in ostiola nigra vix emergentia, rotundata, rimulosa desinentibus; disco subplano; ascis clavatis in stipitem tenuatis, octosporis, p. sporif.  $18\text{-}20 \approx 3,6\text{-}4$ , stipite  $8\text{-}12~\mu$  longo; pseudoparaphysibus praelongis, intus granulosis, paucis, sporidiis distichis allantoideis, curvulis, utrinque minute 1-guttulatis,  $4,7\text{-}5 \approx 1\text{-}1,2$ , dilutissime chlorinis.

Hab. in cortice erassiore emortuo Juglandis regiae (Juglandaceae), Rigny, Galliae (F. Flageolet).— Subaffinis E. Coryli, E. microspermae et E. microsporae sed satis diversa, etiam matrix aliena.

12. Eutypella Laburni Allesch.— Sacc., Syll. Fung. IX p. 461.— Var. 5661 Coluteae Sacc., Ann. Mycol. XII, 1914, p. 298.— Stromatibus cortice nidulantibus et disco erumpentibus subhemisphaericis, basi ligno adnatis 3 mm. lat.; ostiolis conoideis, nitidis obsolete rimosis; ascis  $38-40 \times 4-4.5$ , p. sporif.  $18-20 \mu$  longa; sporidiis allantoideis, dilutissime flavidis,  $6-7.5 \times 2$ .

Hab. in ramis corticatis emortuis Coluteae arbore-

s c e n t i s (Leguminosae), London Ont., Amer. bor. (J. Dearness).

13. Eutypella Gliricidiae Rehm, Ascomyc. Philipp. I, in Philipp. Journ., of Sci. VIII (1913) p. 189. — Stromate peridermio tecto, in cortice interiore effuso, nigro, circa perithecia elevato eaque ambiente; peritheciis in acervulis convexulis valsoideo aggregatis, 8-12 orbiculatim monostichis, globulosis, 300 μ diam., collis longis convergentibus praeditis, papillulis cylindraceis, integris, 0,5-1 mm. longis fasciculatim conjunctis per peridermium laciniatim fissum adhaerensque prorumpentibus; ascis clavatis, brevissime pedicellatis, aparaphysatis, octosporis, 25-30 × 5; sporidiis allantoideis, dilute flavidulis, 5-6 × 1,5.

Hab. in ramulo emortuo Gliricidiae sepium (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). Ostiolis dense fasciculatis et ascis subsessilibus a caeteris speciebus omnino diversa, E. collariatae (C. et E.) Berl. tantum proxima.

14. Eutypella Leucaenae Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2266. — Stromate ramos corticatos late ambiente, imprimis circa acervulos erumpentes peritheciorum, tumidulos, 1 mm. latos, creberrimos, atros, peridermio arcte cinctos conspicuo; peritheciis plerumque 5 monostiche aggregatis, 200  $\mu$  latis, nigris, globulosis, in collum breviusculum elongatis; ostiolis minutis, globulosis, non sulcatis, levibus; ascis clavatis,  $40 \times 5$ , p. sp. 20  $\mu$  longa, aparaphysatis; sporidiis allantoideis, chlorinis,  $5.8 \times 2$ .

Hab. in Leucaena glauca emortua (Leguminosae), Los Baños, ins. Philipp. (C. F. BAKER).

15. Eutypella Bakerii Syd., Ann. Mycol. 14., 1916, p. 361. — Stromate parco tenui circa acervulos tantum evoluto; acervulis gregariis verruciformibus, peridermio rupto arcte cinetis, rotundatis, 1 mm. diam.; peritheciis 4-10 in quoque acervulo, dense stipitatis, globulosis vel e mutua pressione augulatis, 1-2-stichis, in collum longiusculum productis, ostiolis parum exsertis, obtusis, subtilissime 4-sulcatis; ascis clavatis longe stipitatis, p. sp. 32-38 × 4-6, octosporis; sporidiis allantoideis fuscidulis, 8-9 × 2-2,5.

Hab. in ramis Pithecolobii sp. (Leguminosae), M. Maquiling, ins. Philipp. (C. F. BAKER).

16. Eutypella Wistariae H. et P. Sydow, Ann. Mycol. XI, 1913, p. 259.— Stromatibus sparsis, saepe etiam ramos aequaliter densiusculeque obtegentibus, subsphaeroideis 1-2 mm. diam., ligno adnatis et cortice tectis, ostiolis crassis, per peridermium arcte adhaerens erumpen-

tibus, nigris; peritheciis in quoque acervulo copiosis (8-15), dense stipatis, globulosis, collis pro situ plus minusve elongatis; ostiolis crassis, 3-4-sulcatis; ascis oblongo-clavatis, longe pedicellatis, p. sp.  $30\text{-}40 \approx 4\text{-}6,5$ , octosporis; sporidiis distichis, allantoideis, leniter curvulis, hyalinis v. dilute lutescentibus,  $7\text{-}11 \approx 2\text{-}3$ .

Hab. in ramis emortuis Wistariae chinensis (Leguminosae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

17. Eutypella tiflisiensis Rehm, Ascom exsice, fasc. 55 n. 2110, Ann. 5666 Mycol. XII, 1914, p. 171.—Stromate effuso, epidermide tecto, circa perithecia acervulatim collecta nigro elevato; acervulis gregariis, conoideo-tumidulis, a cortice marginatis, 1,5-2 mm. diam.; peritheciis congregatis 10-12, globoso-ovoideis, circa 0,2 mm. lat. 1-2-sti. chis, in collum brevem elongatis, ostiolis cylindraceo-clavatis, plus minusve longis, non sulcatis, atris; ascis clavatis, p. spor. 25-30 × 5, octosporis; sporis allantoideis, dilute luteolis, 7-9 × 2; paraphysibus nullis.

Hab. ad truncum emortuum Magnoliae grandiflorae (Magnoliaceae), Prov. Kutais Ossurgetia, Caucasus (Newodowski).—Ab Eut. monticulosa caracteribus peritheciorum diversa.

Eutypella Maclurae (C. et E.) Ellis, N. Am. Pyr. p. 496. Ofr. Berlese 5667
 Icon. f. III p. 54 tab. 64 f. 1. — var. elongata Rehm, Ann. Mycol.
 XI, 1913, p. 400. — Ostiolis demum cylindraceis, scabriusculis, -1
 mm. longis.

Hab. ad Macluram (Moraceae), Batum, Caucasus (Newodowski): Exs. Ellis et Ev. N. Am. Pyr. 873. — (Modo sporis minoribus  $4.5 \times 1$  differt ab descriptione et Exs.).

19. Eutypella Paliuri Sydow, Ann. Mycol. 17., 1919, p. 141.— Stromata 5668 plus minus regulariter ramos longe lateque ambientia, fere semper aequaliter densiusculeque dispersa, minuta, ½ mm. diam., valsoidea, per peridermium plerumque arcte adhaerens perforatum parum erumpentia, nigricantia, subinde sed raro confluentia; perithecia in quoque stromate circiter 4-8, minuta; ostiola brevia vel plus minus elongata, subinde rostellata 0,5-0,75 mm. longe emergentia, indistincte sulcata; asci paraphysati, cylindracei, longe pedicellati, p. sp. 30-45 × 4-5, octospori; sporae distichae, allantoideae, fuscidulae, 8-10 × 2.

Hab. in ramis Paliuri ramosissimi (Rhamnaceae), Pangllen, prov. Kwangsi, Sinarum (O. A. Reinking).

20. Eutypella Zizyphi Syd. et Butl., Ann. Mycol. IX, 1911, p. 413.— 5669 Stromatibus orbicularibus, ca. 1 mm. diam., cortice immersis, epidermidem leniter elevantibus, peritheciis 4-10 in quoque stromate, dense aggregatis, ovato-globosis, ca.  $^{1}/_{4}$  mm. diam.; ostiolis fasciculatim erumpentibus, breve cylindraceo-conicis, 4-sulcatis; ascis p. sp.  $34-42 \approx 5-8$ , octosporis, longe pedicellatis; sporidis allantoideis, leniter curvulis,  $9-11 \approx 2\cdot2.5$ , hyalinis v. subhyalinis.

Hab. in ramis emortuis Zizyphi jujubae (Rhamnaceae), Pusa, Indiae or. (R. SEN).

21. Eutypella Ruborum H. et P. Sydow, Ann. Mycol. XI, 1913, p. 259.— 5670 Stromatibus sparsis v. subinde laxe aggregatis,  $^3/_4 \cdot 1^{-1}/_4$  mm. diam. et altis, per corticem erumpentibus et hemisphaerice prominentibus, tandem fere superficialibus, atris, partibus matricis leniter nigrificatis insidentibus, rugulosis; peritheciis in quoque acervulo plus minus numerosis, plerumque 5-12, omnino immersis, ostiolis brevissimis tantum plerumque 4-sulcatis prominentibus; ascis elongatoclavatis, longissime stipitatis, p. sp. 30-40 × 7-10, octosporis; sporidiis subdistichis v. congestis, allantoideis, curvulis, in cumulo flavo-brunneolis, singulis pallide lutescentibus, 10-14 × 3.

Hab. in ramis emortuis Rubi sp. (Rosaceae), Kawauye mura prov. Mino, Japoniae (K. HARA).

22. Eutypella canariensis Speg., Anal. Mus. Nac. Buenos Aires, XXVI 5671 p. 121 (1914). — Stromatibus primo tectis dein nudis, ligno late nigrificato insidentibus, noduloso-aggregatis, atris, parvis, 0,5-1,5 mm. diam., per aetatem deciduis et matricem albo-foveolatam relinquentibus; peritheciis paucis, globulosis, 120-150 μ diam., tenuiter membranaceis, olivaceis, contextu minutissimo parum distincto, vix ostiolatis; ascis clavulatis, longe pedicellatis, facile diffluentibus, sporidiis allantoideis, utrinque obtuse rotundatis atque grosse 1-guttatis, chlorinis, 10 × 1,75.

Hab. in ramis emortuis subputrescentibus Plocamae pendulae (Rubiaceae), in collinis prope Puerto Luz, ins. Canar.

23. Eutypella brunaudiana Sacc. — Syll. I p. 151 — var. Ribis aurei Ch. 5672 E. Fairman, Mycologia 10., 1918, p. 240. — Pseudostromatibus sparsis v. gregariis basi discoideis v. angulosis innatis demum erumpentibus et epidermide rupta cinctis, 1-4 mm. diam. linea nigra imperfecte limitatis; peritheciis 4-20, globosis v. angulosis, parietibus crassis ceraceis, nitidis, 300-500 μ diam. nigris; ostiolo brevi obtuso crasso infra rugoso; ascis angustis clavatis longe pedicellatis octosporis, 75 × 6,75-10; sporidiis irregulariter distichis allantoideis hyalinis, 10-13,5 × 3-4, biguttulatis.

Hab. in ramis vetustis Ribis aurei (Saxifragaceae), Ute

Park Colfax C., 2200-2900 m. alt., Novo Mexico, Amer. bor. (P. C. STANDLEY).

24. Eutypella andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 5673 nos Aires XXIII p. 47 (1912). — Acervulis valsoideis aterrimis, conoideis, 1-3 mm. diam., sparsis vel laxe gregariis, primo tectis dein, cortice secedente, nudatis et in ligno infuscato subsuperficialibus; peritheciis stromate extus intusque nigro inclusis, paucis (5.8), monostichis, subglobosis, 200-250 μ diam., atris, nucleo chlorino farctis, ostiolis fasciculato-conniventibus, apice acutiusculis non suleatis; ascis copiosis, clavato-fusoideis, 20-30 \* 4-5, in pedicellum gracilem, 20-25 \* 1-2, productis, paraphysibus duplo longioribus, erassis, guttulatis obvallatis; sporidiis cylindraceo-allantoideis, leniter arcuatis, 6-7 > 1-1,5, primo hyalinis dein subchlorinis, utrinque minute guttulatis.

Hab, in ramis emortuis Lycii chilensis et L. longiflori (Solanaceae), circa Potrerillos prope Mendoza, Argentina.

25. Eutypella staphylina Rehm, Fungi caucas. novi, Monit. Jard. bot. 5674 Tiflis, XXV (1913) p. 12. — Stromatibus gregariis, ramulos ambientibus, sub cortice nidulantibus, in ligno late denigrato sessilibus, haud innatis, orbicularibus, convexulis, 1,5-2,5 mm. diam., atris, glabris; peritheciis globulosis, 5-6, rarius pluribus monostiche innatis, in collum elongatis, ostiolis papilliformibus conjunctis per corticem adhaerentem erumpentibus; ascis fusiformibus, in stipitem elongatis, 70-80 × 8, octosporis; paraphysibus?; sporidiis allantoideis, flavidulis, continuis, 8-10 \times 2,5, in superiore asci parte 2-3-stichis.

Hab. in ramis Staphyleae colchicae (Staphyleaceae), Abchazia, fauces Petskir, in Caucaso (G. Woronow).

26. Eutypella theobromicola Wakefield, Bull. Misc. Inf. Kew, 1918, p. 5675 209, cum icon. - Stromatibus elongatis rima 5 mm. circ. longa ernmpentibus, atris; peritheciis in quoque stromate dense aggregatis, 0,25 mm. diam., collis 6-sulcatis 0,5 mm. longis; ascis clavatis 22-25 × 3,5-4, octosporis; sporidiis subdistichis, elongatis, curvulis pallide olivaceis,  $6.7 \times 1.1,5$ .

Hab. in caulibus Theobromae Cacao (Sterculiaceae), Koshea Gold Coast, Africa trop. (A. C. MILES).

27. Eutypella Premnae Rehm, Ascomyc. Philipp. V, Leaflets of Phi 5676 lipp. Botany, VI (1914) p. 2213. - Stromate ambiente, sub cortice immutato demum soluto late effuso, nigro, acervulos peritheciorum ligno innatorum circ. 1 mm. latos ambiente et obtegente; acervulis

plurimis, gregariis: peritheciis in quoque acervulo 6-8, globosis, glabris, 200 µ diam., collis longis instructis, ostiolis cylindraceis fasciculatis, interdum solitariis, 0,5 mm, usque prominentibus; ascis clavatis, longe stipitatis, p. spor. 12 15 × 4, paraphysibus filiformi, bus obvallatis; sporidiis allantoideis, valde curvatis, hyalinis,  $4 \times 2$ .

Hab. in Premna vestita (Verbenaceae) emortua, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

28. Eutypella paraënsis P. Henn., Hedw. vol. 48 (1908) p. 109. -- Stro- 5677 matibus sub cortice nidulantibus, dein erumpentibus, pulvinatis, atris; peritheciis immersis, 3-10, globulosis, ostiolis clavatis, atrissulcatis, prominulis; ascis stipitatis, clavato-fusoideis, obtusis, octosporis, p. sp. 25-30 × 4-5; sporidiis subdistichis, cylindraceis, obtusis, curvulis, fuscidulis,  $7.10 \times 2.2.5$ .

Hab. in ramis emortuis, hort. botan. Goeldi, Parà, Brasilia (BAKER).

VALSEUTYPELLA v. Höhnel, in Rehm, Ann. Mycol. 16., 1918, p. 224; 18., 1920, p. 72. - Stroma nodulosum, tenace, stratu corticali interno destituto, apice prominenti-dilatato; perithecia parallele disposita, paraphysibus genuinis destituta, pseudoparaphysibus tantum praedita; asci in stratos multiplos dispositi, 4-8-spori; sporidia hyalina allantoidea; membrana peritheciorum tenui. - Typ. generis:

1. Valseutypella tristicha (De Not.) v. Höhn., l. c. et Ber. d. deutsch. 5678 bot. Ges. 36., 1918, p. 311, Diatrype tr. De Not., Syll. I p. 199.

EUTYPA Tul. - Syll. I p. 145, IX p. 460, XI p. 274, XIV p. 484, XVI p. 423, XVII p. 564, XXII p. 359.

1. Eutypa Capparidis Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 5679 Botany, VI (1914) p. 2215. - Stromate primitus sub peridermio serpente, mox ex areis lineari-elongatis, parallele seriatis, ellipsoideis, interdum orbicularibus, demum late confluentibus, primitus epidermide tectis, dein erumpentibus formato, extus intusque atrato, 0,5-2,5 mm. longo, 5-7 mm. lato; peritheciis plerumque arcte seriatis, monostiche stromati innatis, ovoideis, 250-300 µ latis, collis brevissimis instructis, ostiolis incrassatis, interdum fasciculatis, cylindraceis, obtusis, saepe 0,2 mm. prominentibus, non sulcatis; ascis clavatis, longe stipitatis, filiformi-paraphysatis, p. sp. 30 × 6; sporidiis allantoideis, stramineis, 8 \* 2-2,5.

Hab. in ramulis emortuis Capparidis (Capparidaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

2. Eutypa praeandina Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bnenos Aires XXIII p. 47 (1912). — Stromatibus ligno immutato immersis, late effusis, linea nigra limitatis, per corticis rimas erumpentibus, atris, carbonaceis; peritheciis omnino immersis, globosis, 150-200 μ diam., subseriatis, membranaceo-coriacellis, ostiolo parum distincto praeditis; ascis clavato fusoideis, 40 ≈ 5, apice subtruncatis, non rostratis, basi in pedicellum subduplo longiorem, 60-80 ≈ 1-1,5 productis, paraphysibus filiformibus paucis aequilongis commixtis; sporidiis distichis, allantoideis, eguttulatis, 10-12 ≈ 1,5.

Hab. in ramis emortuis Eupatorii saucechicoënsis (Compositae), circa Potrerillos prope Mendoza, Argentina.

3. Eutypa Alangii Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Bo 5681 tany, VI (1914) p. 2214.— Stromate sub epidermide serpente, cortici innato eumque pustulatim 3-10 mm. long. elevante dein rimose dilacerante, extus atro, denudato; peritheciis in plagulis elevatis 5-10 mono-vel distiche innatis, ovoideis, 250 μ latis, pruina alba obductis, collo longo instructis, ostiolis cylindraceis, rectis, obtusis, tonuiter sulcatis, nigris, 0,3 mm. usque altis, plerumque fasciculatis; ascis fusiformibus, aparaphysatis, longe pedicellatis, p. sp. 25 \* 8, octosporis; sporidiis allantoideis, flavidulis, 7-8 \* 2.

Hab. in ramis emortuis Alangii begoniaefolii (Cornaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

Eutypa lata (Pers.) Tul. — Sacc. Syll. I p. 170 — var. rimulosa Sacc., 5682
 Ann. Mycol. XII, 1914, p. 288. — Ostiolis obsolete rimosis; sporidiis 9,5-10 \* 1,8-2.

Hab. in cortice Corni maris (Cornaccae), M. Weisskirchen, Moravia (F. Petrak).

5. Eutypa caulivora Massee.— Syll. XXII p. 360, 1506—Adde Massee, 5683 Kew Bull. 1910, p. 251 cum. 2 tab.— Stromate latissime effuso, innato dein superficiale e ligno nigrescente efformato, extus intusque nigro; peritheciis densissime stipatis, ovoideis, ostiolo breviusculo atro, stromatis superficiem vix attingente donatis; ascis cylindraceoclavatis, parte sporif. subfusoidea, aparaphysatis, octosporis; sporidiis ellipsoideis, utrinque obtusatis, hyalinis, v. dilute chlorinis, 32-35 × 9-11.

Hab. in trunco decorticato Heve a e brasiliensis (Euphorbiaceae), in horto botanico Singapore (H. N. RIDLEY). — Ob sporidiorum formam et magnitudinem certe non Eutypae species; an potius Hypoxyli species e sect. Placoxyli, immatura?. An genus no-

vum, Hyaloxylon Sace. vocandum?

6. Eutypa polygramma Bres., Hedw. 56 (1915) p. 306.— Stromatibus 5684 subcorticalibus, copiosis, linearibus, parallele dispositis, 3-25 cm. longis, circiter  $^1/_2$  mm. latis, primitus epidermide dilute fusca tectis, dein erumpentibus et epidermide cinctis; peritheciis confertis, obovatis vel oblongo-depressis, 250-340  $\mu$  latis, 400  $\mu$  circ. altis, extus intusque nigris, carbonaceis, ostiolis prominulis, subrotundatis, levibus; ascis cylindraceo-clavatis, pedicellatis, 40-45  $\times$  5-6, parte spor. 20-22  $\mu$ , pedicello 20  $\times$  2; sporidiis cylindraceo-curvulis, luride hyalinis, biguttulatis 6-7  $\times$  1,5-2.

Hab. ad culmum B a m b u s a e (Graminaceae), Leyte, Palo, ins. Philipp. (A. D. Elmer).— Obs. Ab Eutypa bambusina Penz. et Sacc. differt stromatibus strictioribus, linearibus, haud lanceolatis et epidermide tantum leviter nigrificata et non zona lineari nigra nitida cinctis.

7. Eutypa Gaduae P. Henn, Hedw. vol. 48 (1908) p. 108. — Stromatibus sparsis vel gregariis, rotundatis vel striiformibus, cortice rimoso erumpentibus, carbonaceo-atris, 2-9 × 1 mm.; peritheciis globulosis, ostiolis conicis; ascis subfusoideis vel clavatis, breve pedicellatis, obtusis, octosporis, 25-30 × 4-5; sporidiis botuliformibus, curvulis, fuscidulis, 7-10 × 2-2,5.

Hab. in culmis Gaduae pallidae (Graminaceae), hort. botan. Goeldi, Parà, Brasilia (BAKER).

8. Eutypa lineolata Rehm in Jaap., Ann. Mycol. 14., 1916, p. 17. — 5686 Stromatibus longitudinaliter et parallele seriatis, subaequalibus, 2-5 mm. latis, 1-10 cm. longis, interdum subconfluentibus, intus et extus nigris, acute marginatis, cortice amisso, ligno dealbato insertis, levibus; peritheciis confertis, globosis, monostichis, 200 μ diam., vertice elongato-conico emergente; ascis clavatis, longe stipitatis, 30 × 4, octosporis, aparaphysatis; sporidiis elongato-cylindraceis, curvulis, continuis, dilute flavidis, 5-9 × 1-1,5.

Hab. in caulibus emortuis vetustis decorticatis Phlomidis fruticos a e (Labiatae), in peninsula Lapad pr. Ragusa, Dalm.—
Eutypae scabrosae et Eut. phaseolinae subaffinis, sed distincta.

Eutypa stenopora (Cke.) Sacc.—Syll. IX p. 469 (an E. atomospora?) — 5687
 fm. Hibisci Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany,
 VI (1914) p. 2215. — Absque diagnosi.

Hab. in Hibisco Rosa-sinensi emortuo (Malvaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Cl. Rehm opinat species haec potius ad Eutypellam adscribenda.

10. Eutypa lagunensis Sydow, Ann. Mycol. 18., 1920, p. 99.— Stroma 5688 effusum, nigrum, ligno decorticato insidens, tenue, ob ostiola cylindracea circiter 300 μ longe prominentia leniter asperatum; perithecia monosticha, aequaliter densiusculeque dispersa, semper solitaria, minutula, collo brevi; ostiola cylindracea, non vel vix sulcata; asci tenues, longe stipitati, p. sp. 30-40 × 2,5-4, octospori; sporae 1-2-stichae, allantoideae, pallidissime hyalino-fuscidulae, 5,5-7,5 × 1,5-2.

Hab. ad truncos decorticatos Manihot utilissimae (Malvaceae), Mt. Maquiling, pr. Laguna, Ins. Philippin. (F. NAVERO).

11. Eutypa inconspicua Rehm, Ascomyc. Fhilipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2265. — Stromate ex areis minutis, lineari-elongatis, longe ellipsoideis, parallele scriatis, ligno innatis eoque striiformiter obtectis, 2-3 mm. longis, vix 1 mm. latis formato, atro; peritheciis stromate innatis, monostichis, globulosis, 150 μ latis, ostiolo hemisphaerico levi; ascis clavatis, 50 × 5, p. sp. 30 μ longa, aparaphysatis, octosporis; sporidiis allantoideis, chlorinoviolascentibus, 7 × 2,5.

Hab. in Streblo aspero (Moraceae), emortuo, Los Baños, ins. Philipp. (M. B. RAIMUNDO). — Quoad formam persimilis E. phaseolinae (Mont.) Sacc., ceterum plane aliena.

12. Eutypa Euterpes P. Henn., Hedw. vol. 48 (1908) p. 108. — Stroma-5690 tibus gregariis, rotundatis vel striiformibus, tectis dein cortice rimoso erumpentibus, atris, usque ad 1 cm. longis, 2 mm. latis; peritheciis immersis, subglobosis, ostiolis elongatis, ad apicem incrassatis, rotundatis, sulcatis, ca. 200 × 40-80; ascis fusoideo-clavatis, subsessilibus, octosporis, 30-40 × 4-5; sporidiis subdistichis, botuliformibus, curvulis, hyalino-fuscidulis, 6-8 × 2-2,5.

Hab. in vaginis emortuis Euterpes oleraceae (Palmae), hort-botan. Goeldi, Para, Brasilia (BAKER).

13. Eutypa falcata H. et P. Syd., Ann. Mycol. X, 1912, p. 406.— Stro-5691 matibus primo peridermio tectis, dein in ligno decorticato superficialibus, irregulariter effusis, crustaceis, usque 2 cm. (v. ultra?) longis, circ. <sup>1</sup>/<sub>3</sub> mm. altis, cinnamomeo-brunneis v. obscure brunneis; peritheciis in stromate aequaliter sparsis, monostichis, circ. 200 μ diam., ostiolis parum prominulis hemisphaericis integris praeditis; ascis cylindraceo-clavatis, octosporis, longissime pedicellatis, p. sp. 20-25 × 3,5-4,5; sporidiis allantoideis, valide falcato-curvatis, hyalinis, 5-8 × 1,5.

Hab. in ramis Camelliae japonicae (Theaceae), prov.

Mino, Kawauye-mura, Japonia (K. HARA).

14. Eutypa megalosoma Rehm, Ascomye. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2264. — Stromate nigro in cortice interiore late effuso, plagulas raro eutypeoideas, mox 1-10 cm. longas, 5 mm. latas, plerumque ellipsoideas, 1-5 mm. altas, ab epidermide demum multoties disrupta tectas et obtuse marginatas efformante, intus hinc inde albescente; peritheciis monostiche innatis et constipatis, globulosis, 300 μ diam., in collum elongatis, ostiolis plerumque discoideo-aggregatis, subconoideis, tenuiter sulcatis, prominentibus ornatis; ascis fusoideis, longe pedicellatis, p. sp. 20-25 × 8, octosporis, aparaphysatis; sporidiis allantoideis, dilute chlorinis, 7-9 × 2,5.

Hab. in ramo emortuo delapso, Los Baños, ins. Philipp. (E. Sablan) et Mt. Maquiling prope Los Baños, Ins. Philipp. (M. B. Raimundo).— Arcte accedit ad E. Indibundam Sacc.; differt imprimis stromate latas plagas formante et sporidiis minoribus.

15. Eutypa macropunctata Rehm, Ascomyc. Philipp. IV, Leaflets of 5698 Philipp. Botany, VI (1913) p. 1941. — Stromate per corticem extus et subtus usque ad 4 cm. long. et 2 cm. lat. atratum in lignum linea atra profunde decurrente; peritheciis in cortice interiore haud decoloratum creberrimis, innatis, globulosis, 0,5 mm. latis, collo longo instructis, ostiolis cylindraceis, 0,3 μ altis, non sulcatis prominentibus; ascis clavulatis, longe stipitatis, octosporis, parte sporifera 15 × 4; paraphysibus?; sporidis distichis, oblongis, vix curvatulis, biguttulatis, hyalinis, 2-3 × 1-1,5.

Hab. ad ramos emortuos deciduos, Luzon Prov. Laguna, Mt. Maquiling, ins. Philipp. (M. B. RAIMUNDO).

16. Eutypa gigaspora Massee, Bull. Bot. Garden Kew, 1912, p. 190.—5694. Stromate latissime effuso, innato, dein superficiale, scabro, extus intusque atro; peritheciis majusculis, ostiolo papillato praeditis; ascis cylindraceis, brevissime pedicellatis, 200 × 12, octosporis; sporidiis oblique monostichis, elongato-ellipsoideis, rectis vel plus minusve curvulis, hyalinis, 30-32 × 8-9.

Hab. in ligno emortuo, in ins. Trinidad (CARACCIOLO).

## PERONEUTYPA Berl. — Syll. XVII p. 569, XXII p. 362.

Peroneutypa heteracantheides Sacc., Notae Mycol. XXIV p. 9 (Bull. 5695)
 Orto bot. Napoli, 1918). — Peritheciis corticolis late et densinscule gregariis, globosis, nigris, stromate connectente pallide nigricante fere obsoleto, exiguis, vix 300 μ diam., ostiolis solitarie v. fasci-

culatim erumpentibus, conico-cylindraceis, levibus, perithecio sesquiv. duplo longioribus; ascis fusiformibus brevissime tenuato-stipitatis,  $16 \approx 3.5$  aparaphysatis, octosporis; sporidiis perexiguis, subdistichis, allantoideis, fortiter curvis,  $3.4 \approx 1$ , utrinque minutissime 1-guttulatis, e hyalino dilutissime olivaceis.

Hab. in ramis emortuis corticatis Heveae brasiliensis (Euphorbiaceae), et Cassiae sp. (Leguminosae), cultarum, Singapore (BAKER). — Peraffinis Peroneutypae heteracanthae a qua imprimis peritheciis, ostiolis et sporidiis multo minoribus distinguitur.

- 2. Peroneutypa discriminis Rehm, Ascomyc. Philipp. VI, Leaflets of 5696 Philipp. Bot. VI (1914) p. 2267.— Stromate irregulariter magnlatim effuso, primitus peridermio obtecto dein Eutypae latae simillimo, plano, nigro-fusco, non verrucoso, vix 1 mm. crasso; peritheciis globulosis, monostiche arcte congregatis, 200 μ latis, ligno atrato innatis, ostiolis cylindraceis, obtusis, erectis, carbonaceis, nigris, 1 mm. usque longis, parallelis; ascis clavatis, stipitatis, p. sp. 12-14 × 4, aparaphysatis; sporidiis allantoideis, chlorinis, 5-6 × 1.5-2.
  - Hab. in Macaranga tanarius (Emphorbiaceae), emortuo, nec non in Streblo aspero (Moraceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO). Ostiolis cylindraceis brevissimis a typo generis divergens.
- 3. Peroneutypa cyphelioides Rehm, Ascomyc. Philipp. VI, Leaflets of 5697 Philipp. Botany, VI, (1914) p. 2269. Stromate corticale late effuso, subcrustaceo, atro; acervulis peridermium protuberantibus eoque semper obtectis, saepe lineariter aggregatis, non prominentibus, suborbicularibus, 1-3 mm. latis; peritheciis usque ad 8 aggregatis, cortici innatis, monostichis, globosis, 300 μ latis in collos elongatos fasciculatos productis; ostiolis cylindraceis, basi albescentibus, apice dilatatis, scabriusculis, fusco-nigris, saepe divergentibus, 1-2 mm. longis; ascis clavatis, aparaphysatis, p. sp. 15 × 4-5; sporidiis allantoideis, valde curvatis, chlorinis, 4 × 1. Ad basim ostiolorum saepe hypharum fasciculi erecti, rigidi, filiformes, nigri, sessiles adsunt.

Hab. in ramo emortuo Strebli asperis (Moraceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO) — fm. lignicola Rehm, loc. cit. — Differt peritheciis ligno atrato innatis, ostiolis rigidis apice non dilatatis, nigris, 3 mm. longis. Hab. cum typo.

 Peroneutypa Philippinarum Rehm, Ascomyc. Philipp. VI, Leaflets of 5698 Philipp. Botany, VI (1914) p. 2268.— Stromate ambiente, late effuso, nigro, per corticem interiorem excurrente, peridermio immutato tecto peritheciis plerumque solitariis, interdum 2-3 coacervatis, non acervalatim collectis, cortice innatis, monostichis, globosis, 200  $\mu$  latis, ostiolis cylindraceis, rigidis, carbonaceis, nigris, scabriusculis, 0.3-1 mm. longis, interdum fasciculatim erumpentibus instructis; ascis clavatis, stipitatis, p. sp. 15  $\times$  4-5, aparaphysatis; sporidiis allantoideis, valde curvatis, hyalinis,  $4 \times 1,5$ .

Hab. in ramis emortuis Strebli asperi (Moraceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO). — Var. Gliricidiae Rehm, loc. cit. — Peritheciis sub cortice tenui ligno innatis, plerumque solitariis.—Hab. in Gliricidia sepium (Leguminosae), emortua, Los Baños, Ins. Philipp. (M. B. RAIMUNDO). — Ad Eutypellam Gliricidiae Rehm transiens.

#### PERONEUTYPELLA Berl. — Syll. XVII p. 569, XXII p. 363.

Peroneutypella japonica H. et P. Sydow, Ann. Mycol. XI, 1913, p. 5699
 259. — Stromatibus sub peridermio nidulantibus, atris, sparsis, rotundatis v. oblongis, pulvinatis, carbonaceis, 1-3 mm. long., 1-2 mm. latis; peritheciis 2-3-stichis, globosis, numerosis in quoque acervulo (15-50 vel ultra), 0,15-0,2 mm. diam.; ostiolis cylindraceis, glabris, rectis, usque 1 mm. long.; ascis clavatis, p. sp. 20 × 4-4,5, octosporis; sporidiis allantoideis, hyalinis, 4-5 × 1; paraphysibus nullis.

Hab, in ramis Rhois sp. (Anacardiaceae), Kawanye-mura pr. Mino, Japonia (K. HARA).

2. Peroneutypella graphidioides Sydow, Philipp. Journ. of Sc., v. 9., 5700 Sect. C., n. 2., 1914, p. 163. — Stromatibus sparsis vel aggregatis forma valde irregularibus, rotundatis vel elongatis, saepe etiam trigonis vel irregularibus confluentibus, Graphidis habitum subinde aemulantibus 0,75-2 mm. longis, confluendo subinde usque 3 mm. longis, cortice exteriore immersis, peridermium elevantibus ab eoque arcte cinctis, atris, ostiolis fere solis erumpentibus; peritheciis in singulo stromate numerosis (15-60), globulosis vel e mutua pressione angulatis; ostiolis inter se liberis, cylindraceis, apice rotundatis, non sulcatis, 300-800 μ longis, 100-120 μ latis, ascis jam elapsis; sporidiis allantoideis vel subrectis, hyalinis, 3,5-4,5 μ longis, 1 μ latis.

Hab. in ligno emortuo Terminaliae Catappae (Combretaceae), Palawan Taytay, Ins. Philipp. (MERRILL).

3. Peroneutypella indica Syd. et Butl., Ann. Mycol. IX, 1911, p. 414. — 5701 Stromate late effuso, peridermio tecto; peritheciis hine inde 6-10

valsiformiter congregatis et tubercula rotundata v. irregularia 1.2 mm. diam., parum prominula efficientibus, mono-distichis, globosis, basi ligno immersis, 1/2-2/4 mm. diam.; ostiolis breviter cylindraceis, erumpentibus, 0,5-1 mm. long., apice rotundatis; ascis clavatis, p. sp. 15-30 \* 4-5,5, longe pedicellatis; sporidiis leniter curvulis, ex hyalino dilute fuscescentibus, 7-8,5 \* 2-2,5.

Hab. in ramis emortuis Dalbergiae Sissoo (Leguminosae), Pusa, Indiae or. (E. J. Butler). - Per. ambientis proxima sed habitu peritheciisque biseriatis diversa.

4. Peroneutypella adelphica Rehm, Ascomyc. Philipp. VI, Leaflets of 5702 Philipp. Botany, VI (1914) p. 2268. - Stromate corticale late effuso, peridermio tecto, plerumque circa perithecia acervulatim collecta elevato, atro; acervalis peridermium hemisphaerice protuberantibus eumque non superantibus, saepe ramulos ambientibus, 0,5-1 mm. diam.; peritheciis raro sparsis, plerumque 3-6 gregarie monostiche cortici innatis, globulosis, 200 μ diam., in collum elongatis; ostiolis cylindricis, tenerrimis, 0,5 mm. longis, demum divergentibus, per rimulam albidam peridermii prorumpentibus; ascis clavatis, p. sp. 15 \* 5, paraphysibus nullis immixtis; sporidiis allantoideis, hyalinis,  $5.6 \approx 1.5$ .

Hab. in ramis emortuis Strebli asperis (Moraceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO). - E typo P. heteracanthae.

5. Peroneutypella Arecae Sydow, Philipp. Journ. of Sc., v. 9., Sect. 5703 C. n. 2, 1914, p. 163. - Stromatibus plerumque dense gregariis, 0,5-1,25 mm. diam., e basi irregulariter orbiculari subpulvinatis, immersis, epidermidem pustuliformiter elevantibus et ejusdem laciniis arete cinctis, ostiolis fere solis erumpentibus, atris, carbonaceis; peritheciis in singulo stromate 5-20 (plerumque 8-10), 200-, 300 g. diam., collo pro situ plus minus longiore instructis; ostiolis inter se liberis cylindraceis, apice rotundatis, non sulcatis, 300-600 µ longis, rectis; ascis anguste clavatis, superne rotundatis, subsessilibus, p. sp. 10-20 μ longa, 4-6 μ lata, octosporis; sporidiis irregulariter distichis vel conglobatis, allantoideis, rectis vel leniter curvatis, hyalinis, 5-7 µ longis, 1 µ latis.

Hab. in Areca Catechu (Palmae), Palawan Taytay, Ins. Philipp. (MERRILL). - Peron. Cocoës Syd. affinis, differt tantum sporidiis majoribus et matrice.

6. Peroneutypella Cocoës H. et P. Sydow, Ann. Mycol. IX, 1911, p. 5704 145. — Stromatibus plus minus dense gregariis per matricis fibras erumpentibus et ejusdem laciniis cinctis, orbicularibus, applanato-

semiglobosis, atris, carbonaceis,  $^{a}/_{4}$ -1  $^{1}/_{4}$  mm. diam.; peritheciis dense stipatis, minutis, plurimis globosis; ostiolis plurimis cylindraceis, glabris, rectis, usque 0,5 mm. long.; ascis cylindraceo-clavatis, p. sp. 16-20  $\times$  3-4, octosporis; sporidiis allantoideis, rectis v. curvulis, continuis, hyalinis, 3,5-4  $\times$  1, distichis.

Hab. ad corticem Cocoës nuciferae (Palmae), emortuum, Cabancalan, Negros, ins. Philippin. (E. D. MERRILL).

7. Peroneutypella pusilla Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 50 p. 414. — Stromate tenni sub peridermio longe lateque effuso, linea nigra plus minus manifesta limitato; peritheciis hinc inde 2-6 dense botryose v. stromatice aggregatis et tubercula minuta rotundata ca. 0,5 mm. diam., peridermio haud pustulatim elevato tecta aequaliter sparsa efformantibus, monostichis, basi ligno immersis, ovato-globosis, 200-300 μ diam., ostiolis tantum erumpentibus, breviter cylindraceis, atris, apice rotundatis, usque 0,5 mm. long.; ascis clavatis, p. sp. 14-20 × 4-5, longe pedicellatis, sporidiis allantoideis subhyalinis, 4-5 × 2-2,5.

Hab. in ramis emortuis corticatis Citrisp. (Rutaceae), Sagaing, Burma, Indiae or. (E. J. BUTLER).— Per. aurantiicolae Speg. proxima sed acervulis parvulis breviter ostiolatis diversa.

8. Peroneutypella ambiens Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 570 p. 414. — Stromatibus ramos longe lateque aequaliter tegentibus, dense dispositis, singulis minutis, 0,5-1 mm. diam., minute pustuliformibus, cortice exteriore tectis; peritheciis 2-8 in quoque stromate, monostichis, globosis, ca. 0,5-2/3 mm. diam.; ostiolis cylindraceis, 0,5-3/4 mm. longis, atris, rigidis, apice rotundato, 3-4-sulcatis; ascis cylindraceo clavatis, longe pedicellatis, p. sp. 20-35 × 4-6, octosporis facile diffluentibus; sporidiis plerumque distichis, allantoideis, ex hyalino fuscescentibus, 7,5-9 × 2-2,5.

Hab. in ramis deciduis, Dehra Dun, Indiae or. (E. J. BUTLER).

CRYPTOSPHAERIA Grev. — Syll. I p. 182, IX p. 470, XIV p. 486, XVI p. 426, XXII p. 365.

1. Cryptosphaeria moravica Petr. et Sacc., Ann. Mycol. XI, 1913, p. 570, 558. — Peritheciis plus minus dense gregariis v. hinc inde congregatis, globosis, nigris, pruina alba nulla obductis, 0,5 mm. diam. ostiolo brevissimo, rotundo, erumpente integro; ascis tereti-clavatis, apice leviter tenuatis truncatis, 35-40 × 6-7 (p. sp.) in pedicellum praelongum filiformem 55-60 × 2-3 sensim tenuatis, aparaphysatis, octosporis; sporidiis distichis v. oblique monostichis, allantoideis.

curvatis, 9-11 \* 2,5 dilute olivaceis.

Hab. in ramis morientibus Pruni spinosae (Rosaceae), Weisskirchen, Moraviae (F. Petrak). — Affinis Crypt. crepinianae Sace. et Roum. sed bene distincta.

2. Cryptosphaeria philippinensis Rehm, Ascomyc, Philipp. II, in Philipp. 5708 Journ. of Sci. VIII (1913) p. 258. — Stromate cortici innato, peridermio dilute cinereo distincte maculiformiter elato in plagulis irregulariter orbicularibus plus minusve longitudinaliter usque ad 3 × 1 cm. undulatim confluentibus, demum a peridermio diffracto nigro-marginatis, intus linea nigra tenuissime notatis; peritheciis monostichis, dense gregariis, globosis, cortici haud mutato innatis, 150 μ diam., ostiolo hemisphaerico punctiformi atro in peridermio conspicuis; ascis clavatis, in stipitem tennem usque ad 40 μ elongatis, parte sporifera 25 × 8, aparaphysatis; sporidiis allantoideis, hyalinis, 8-9 × 2, di-tristichis.

Hab. in ramo emortuo humo jacente, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Affinis Cr. erepinianae Sace. et Roum. sed peritheciis multo minoribus.

ALLESCHERINA Berl. in Abbado, Malpighia 1902, p. 300.— Berlese, Icon. Fung. III p. 108.— A gen. *Cryptovalsa* dignoscitur stromate effuso eutypeo.

1. Allescherina Cajani Syd. et Butl., Ann. Mycol. IX, 1911, p. 413.— 5709 Pseudostromate effuso, sub peridermio repente. vix conspicuo; peritheciis plus minus dense gregariis v. seriatis, sed vix valsiformiter acervulatis, cortice v. basi ligno immersis; epidermium leniter elevantibus, globosis, 0,5-1 mm. diam., atris, collo brevi, crassiusculo; ostiolo obtuso, peridermium perforante, subprominulo; asci clavatis, longe stipitatis, 60-90 \* 15-20, polysporis; sporidiis allantoideis, subhyalinis, 10-13 \* 3-4.

Hab. in ramis corticatis C a j a n i i n d i c i (Leguminosae, Pusa Indiae or. (E. J. Butler). — Ob perithecia gregaria ad Cryptovalsam nutat, coeterum All. Boehmeriae proxima a qua differt sporidis parum majoribus et peritheciis magis aggregatis.

2. Allescherina Strebli Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2264. — Stromate in peridermio cinerascente effuso, vix conspicuo; peritheciis numerosis, singulariter cortice immutato innatis, globulosis, 300 μ diam., peridermium vix protuberantibus, ostiolis rotundatis, parvulis, nigris, perforantibus; ascis clavatis, longestipitatis, 90 × 5, p. sp. 50 μ circ. longa, poly-

sporis, aparaphysatis; sporidiis in quoque asco 60-80, allantoideis, vix curvatulis, flavidulis,  $7.9 \times 2$ .

Hab. in Streblo aspero (Moraceae), emortuo, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

3. Allescherina Boehmeriae Syd. et Butl., Ann. Mycol. IX, 1911, p. 413.— 571 Pseudostromate effuso, peridermio tecto, vix conspicuo; peritheciis sparsis v. subgregariis, in cortice omnino immersis, globulosis, c. 400-500 μ diam., atris, epidermidem leniter elevantibus, collo brevi; ostiolis minutis vix prominulis; ascis clavatis, 65-100 × 10-15, polysporis, longe pedicellatis; sporidiis allantoideis, subhyalinis, 10-13 × 2-3.

Hab. in ramis emortuis Boehmeriae niveae (Urticaceae), Pusa, Indiae or. (INAYAT).

CRYPTOVALSA Ces. et De Not.—Syll. I p. 187, IX p. 471, XI p. 276, XIV p. 487, XVI p. 426, XVII p. 567, XXII p. 366.

Cryptovalsa microspora Sacc., Notae Mycol. XXIV p. 8 (Bull. Orto 578 bot. Nap. 1918). — Stromatibus longe lateque effusis, raro limitatis, subcutaneis, nigricantibus; peritheciis corticolis et interdum ligno infossis, globulosis, 250-350 μ diam., ostiolis demum erumpentibus, nigris, subrimosis; ascis fusoides apice tenuato-obtusulis, p. sp. 37-48 × 9, stipite filiformi 30-22 μ longo, multisporis; sporidiis 2-3-stichis, allantoideis, hyalinis, perexiguis, 3 × 1.

Hab. in ramis emortuis et putrescentibus Heveae brasiliensis (Euphorbiaceae) cultae, Singapore, Asia (BAKER).—Socia interdum Eutypa ludibunda.

2. Cryptovalsa philippinensis Sacc., Ann. Mycol. XI, 1913, p. 554. — 57t Stromatibus innato-erumpentibus, lineari-elongatis, parallelis, 2-3 mm.long., nigris; peritheciis stromate immersis globulosis, 180-190 μ diam., nigris, ostiolis perithecio brevioribus non v. vix emergentibus, obtusis, poro subinde rimuloso; ascis crasse clavatis, apice rotundatis, 50 × 12-13 p. sp., in pedicellum brevem 20-25 × 2-3 sensim tenuatis, myriosporis; sporidiis conglobatis perexiguis allantoideis, 4,5-5 × 1, hyalinis, coacervatis dilute olivascentibus.

Hab. in culmis Rottboelliae exaltatae (Graminaceae), Bontoc subprovince, Ins. Philippin. (M. Vanoverbergh).— Cryptov. microsperma (Sacc.) Berl. stromate sublineari, ascis crassioribus et brevius pedicellatis, matrice etc. distinguenda.

3. Cryptovalsa protracta (Pers.) Ces. et D. N. (cfr. Berlese, Icon. f. III 57 p. 112 tab. 140 f. 2).— var. Paliuri Rehm, Ann. Mycol. XI, 1913,

p. 401. — Stroma crassum, nigrum, effusum, peridermio atrato tectum, cortici innatum et profunde in ligno lineariformiter serpens. Perithecia monosticha, 5-20 arcte congregata, epidermide nigrata, tandem laciniatim rupta tecta, demum fere libera, atra, ovoidea, 6,5 mm. diam., collis brevissimis, ostiolis crassis, quadrisulcatis prominula. Asci clavati, longestipitati -80 × 10, 32-spori. Sporae allantoideae, dilute fuscidulae. 8-10 × 2-2.5.

Hab. ad ramum Paliuri (Rhamnaceae), in horto botanico Tiflisiense, Caucasus (Nowodowski).

4. Cryptovalsa Camelliae H. et P. Syd., Ann. Mycol. X, 1912, p. 406.— 5715 Stromate corticali, longe lateque effuso, ramos ambiente; acervulis prominentibus peridermio laciniatim rupto cinetis, aequaliter densiusculeque distributis, tumidulis, subrotundis, <sup>1</sup>/<sub>2</sub>-<sup>2</sup>/<sub>4</sub> mm. diam.; peritheciis 5·10 in quoque acervulo, substipatis, mono-v. distichis, e mutua pressione angulatis, 175·250 μ diam., in collum breviusculum attenuatis; ostiolis parum exsertis, rotundatis, incrassatulis; ascis clavatis, longe pedicellatis, apice rotundatis, p. sp. 60-80 × 11-16, polysporis; sporidiis allantoideis rectis v. curvulis, intra ascos flavis, singulis hyalinis, 6·9 × 1,5·2.

Hab. in ramis Camelliae japonicae (Theaceae), pr. Mino Kawauye-mura, Japonia (K. HARA).

5. Cryptovalsa indica Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 5716 412. — Pseudostromate effuso, ligni superficiem nigrificante, peridermio tectis; acervulis sparsis v. aggregatis et subinde confluentibus, rotundatis, 0,5 1 mm. diam., tumidulis, bene limitatis, peridermio laciniatim rupto cinetis v. semitectis; peritheciis 5-12 in quoque acervulo, monostichis, globulosis, 200-300 μ diam., in collum brevem attenuatis; ostiolis congestis, rotundatis, vix exsertis; ascis clavatis, p. sp. 35-45 × 8-15, longiuscule pedicellatis, aparaphysatis, polysporis; sporidiis conglobatis, inaequilateris, hyalinis, dein dilute fuscescentibus, continuis, 5-7 × 1,5-2.

Hab, in ramis corticatis emortuis, Dehra Dun, Indiae or. (INAYAT).

6. Cryptovalsa planiuscula Syd. et Butl., Ann. Mycol. IX, 1911, p. 412.— 5717 Pseudostromate effuso, sub peridermio repente; acervulis sparsis, rotundatis, 1-1,5 mm. diam., vix prominulis, planiusculis peridermio tectis; peritheciis ovato-globosis, 4-10 in quoque acervulo, minutis, 125-175 μ diam., in collum breve attenuatis, ostiolis minutissimis haud exsertis; ascis clavatis, p. sp. 40-70 × 9-14, aparaphysatis, longe pedicellatis, polysporis; sporidiis allantoideis, curvulis, continuis, ex hyalino fuscescentibus, 8-10 × 2,5-3.

Hab. in ramis emortuis, Pusa, Indiae or. (R. Sen). — Ob acervulos planiusculos et peritheciis parvis distincta species.

**DIATRYPE** Fr. — Syll. I p. 191, IX p. 472, XI p. 276; XIV p. 487, XVI p. 426, XVII p. 571, XXII p. 367.

Diatrype sublinearis Rehm, Ann. Mycol. IX, 1911, p. 366. — Stro-578 matibus arcte gregariis, in cortice interiore vix nigrata sessilibus, transverse positis, peridermio disrupto cinetis, atris, 1-3 mm. long., c. 1 mm. lat., ellipsoideis, intus albidis; peritheciis globulosis, 0,3-0,4 mm. diam., 10-30 arcte monostichis congregatis, collis angustis in stromatis superficie convergentibus, papillulis globulosis, subrugosis, prominentibus; ascis fusiformibus, longe stipitatis, p. spor. 25-30 × 5-7, octosporis; sporis allantoideis, dilute flavidulis, 6-8 × 2, distichis; paraphysibus nullis.

Hab. ad ramulos emortuos Betulae lentae (Betulaceae), London, Canada, Amer. bor. (Dearness).—Diatr. linearis E. et E. imprimis stromatibus ligno innatis diversa.

2. Diatrype microstroma H. et P. Syd. et Hara in H. et P. Syd., Ann. 5719 Mycol. X, 1912, p. 407. — Stromatibus erumpentibus, tandem superficialibus, sparsis v. plus minus dense aggregatis, rotundatis v. rotundato-ellipticis, <sup>2</sup>/<sub>3</sub>-1 mm. longis, hemisphaerico-pulvinatis, altis v. fusco-atris, intus pallidioribus; peritheciis monostichis, globulosis, 8-10 arcte stipatis; ostiolis minimis, parum prominentibus, atris, indistincte scabris; ascis clavatis, p. sp. 35-50 × 6-8, octosporis, longe stipitatis; sporidiis allantoideis, hyalino-fumosis, 7-11 × 2-3, utrinque obtusis.

Hab. in ramis Ehretiae acuminatae (Borraginaceae), et Paulowniae tomentosae (Scrophulariaceae), pr. Mino, Kawuye mura, Japonia (K. HARA).

3. Diatrype Baccharidis P. Henn., Hedw. vol. 48 (1908) p. 11.— Stro- 5720 matibus erumpenti-superficialibus, aggregato-effusis, pulvinato-sub-conoideis, atris, ca. 1 mm. diam.; peritheciis immersis, albidis, sub-globosis, ostiolatis; ascis clavatis, stipitatis, octosporis, 50-60 μ longis, p. sp. 30-40 × 5-6; sporidiis subdistichis, allantoideis, 7-11 × 2-3,5, fuscidulis.

'Hab. in ramis Baccharidis (Compositae), Serra da Cantareira, S. Paulo, Brasilia.

4. Diatrype paurospora Sacc., Mycologia 12., 1920 p. 201. — Stroma- 5721 tibus gregariis, erumpenti-superficialibus, peridermio cinctis, pulvinatis, nigris, duris, fragilibus, superficie colliculosis v. rimosis, 1.2

mm. diam.; peritheciis pancis, globosis, 0,3 mm. diam., substantia sordide grisea exceptis; ostiolis vix excedentibus obtusis; ascis fusoideis, apice rotundatis, 35-40 × 7, subsessilibus, aparaphysatis (†), 2-4-sporis; sporidiis allantoideis, curvalis, utrinque rotundatis, 16 × 4-5, hyalinis, vix chlorinis, tunica crassiuscula.

Hab. in ramis corticatis emortuis Quercus utahensis (Cupuliferae), pr. Ft. Douglas, Utah, Amer. bor. — Imprimis ascistantum 2-4-sporis distinguenda species.

5. Diatrype Stigma (Hoffm.) Fr.— Syll. I p. 193. — Var. japonica Saec., 5722 Notae Myc. XXII p. 175 (Acc. Pad., 1917). — Late effusa e cortice erumpens; distinguitur a typo estiolis paullo magis prominulis: asci 22-24 \* 4 p. spor.; sporidia 4,3-6 \* 1,2, hyalina, rectiuscula.

Hab. in ramis emortuis corticatis Q u e r e u s sp. (Cupuliferae), Kawanye, Japonia (HARA).

6. Diatrype riograndensis Rehm, Ann. Mycol. IX, 1911, p. 368.—Stroma 5723 effusum; acervulis gregariis, ramulum ambientibus, conoideis, corticolis, erumpentibus, peridermio rupto cinetis, crustula nigra stromatica obtectis, 1-1,5 mm. diam., extus et intus nigro; peritheciis in quoque acervulo c. 4 monostichis, globoso-ovoideis, collis brevissimis, ostiolis prominentibus conoideis, subsulcatis, parvulis obsessis; ascis clavatis, tenerrimis, c. 40-50 × 6-8, octosporis; sporis allantoideis, rectis v. subcurvatulis, viridulis, 8-9 × 2; paraphysibus nullis.

Hab. ad ramulos E u p h o r b i a e e a e, Rio Grande do Sul, Brasiliae (RICK, THEISSEN). — Diatr. capensi Kalch. et Cooke proxima.

7. Diatrype minoensis Sacc., Ann. Mycol. XI, 1913, p. 313. — Stromatibus dense gregariis interdum confluentibus, subcutaneo-erumpentibus, mox liberis et epidermide arrecta cinetis, convexo-pulvinatis, nigris, carbonaceis, intus pallidis, ambitu subcirculari circ. 1 mm. diam., disco ostiolis integris obtuse papillatis asperulo; peritheciis globulosis, 300  $\mu$  diam., irregulariter submonostichis; ascis tereticlavatis, apice rotundatis, octosporis, 40-45  $\approx$  7-9, in stipitem filiformem 40-80  $\mu$  cr. attenuatis; sporidiis distichis cylindraceo-curvulis (allantoideis) longiusculis, utrinque rotundatis, 14  $\approx$  2-2,3, raro usque ad 18-19  $\approx$  2, olivaceis.

Hab. in ramis corticatis I desiae polycarpae (Flacourtiaceae), Prov. Mino, Kawauye, Japonia (HARA). — Imprimis sporulis ratione longis dignoscitur.

8. Diatrype japonica Sacc., Ann. Mycol. XI, 1913, p. 314. - Stroma- 5725

tibus dense gregariis subcutaneo-erumpentibus, prominentibus, pulvinatis, carbonaceis, nigris, 2-3 mm. diam., intus pallidiore et basi amoene fulvescente-subfurfuraceo, disco convexiusculo et ostiolis brevissimis conoideis vix punctulato; peritheciis 6-8 in quoque stromate, globulosis, nigris, intus nitidulis, 200 μ diam., submonostichis; ascis tereti-oblongis, apice truncatis 40-50 × 7-8 (p. spor.), in pedicellum praelongum filiformem, 75-80 × 3 attenuatis, octosporis; sporidiis distichis, cylindraceis, curvulis (alfantoideis), 9-11 × × 2,5-2,8, dilute olivaceis.

Hab. in ramulis corticatis emortuis Litseae glaucae (Lauraceae), Prov. Mino, Kawauye, Japonia (HARA). — Elapsis peritheciis, foveolae in cortice manent amoene fulvae, species certe affinis Diatrypae ruficarni B. et C. sed ascis et sporidiis majoribus, stromatibus magis exertis et praesertim foveolis rufo-pruinosis distinguitur.

9. Diatrype Albizziae Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. 5726 Botany, VI (1914) p. 2267. — Stromatibus in ligno late denigrato sessilibus, prorumpentibus, peridermio laciniato arcte cinctis, tuberculiformibus, orbicularibus, 2-3 mm. latis, extus intusque atris, solitariis, interdum connatis; peritheciis 10-12, monostiche innatis, globulosis, 200 μ latis, ostiolis conoideis, obtusis, distincte sulcatis, nigris; ascis clavatis, longe stipitatis, 60 × 7, p. sp. 20-25 μ longa, aparaphysatis, octosporis; sporidiis allantoideis, chlorinis, 5-8 × 2.

Hab. in ramis Albizziae Acles (Leguminosae), Los Baños, ins. Philipp. (C. F. BAKER).—Imprimis similis D. polysaccoidi Rehm.

10. Diatrype megale Rehm, Ascomyc. Philipp. I, in Philipp. Journ. of 5727 Sci. VIII (1913) p. 189. — Stromatibus in cortice interiore late denigrato innatis, dispersis, peridermio laciniatim disrupto et adhaerente cinctis, oblongo-orbicularibus, 0,0-1,5 cm. diam., 1 mm. altis, margine sterili cinctis, crasse nigre obtectis, intus albidulis; peritheciis monostiche dense aggregatis, globulosis, usque ad 500 μ diam., plurimis, collis brevibus instructis, ostiolis hemiglobosis, demum sulcatis, poro perspicuis pertusis stroma superantibus; ascis fusiformibus, longe tenuiter pedicellatis, p. sp. ca. 25 × 5, filiformi-paraphysatis; sporidiis allantoideis, dilute flavidulis, 6-7 × 2.

Hab. in ramo emortuo Gliricidia e sepium (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). D. Macounii E. et E. affinis.

11. Diatrype polygonia Rehm, Ascomyc. Philipp. VI, Leaflets of Phi- 5728

lipp. Botany, VI (1914) p. 2266.— Stromatibus in ligno dilute denigrato sessilibus, cortice disrupto arcte laciniatim cinctis, alte protuberantibus, tuberculiformibus, orbicularibus, 2 mm. diam. 1,5 altis, in acervulos orbiculares 1-2 cm. latos arcte coacervatis, angulariter compressis, nigris; peritheciis in stromate extus intusque atro circ. 10, mono-vel distiche innatis, globulosis, 200  $\mu$  diam., ostiolis semiglobosis, rugulosis, atris, poro perspicuo pertusis; ascis clavatis, aparaphysatis, longe pedicellatis, 60  $\times$  7, p. sp. 25  $\mu$  longa, octosporis; sporidiis allantoideis, chlorinis, 5-8  $\times$  2-2,5.

Hab. in Gliricidia sepium emortua (Leguminosae), Los Baños, ins. Philipp. (C. F. BAKER). — var. Strebli Rehm, loc. eit. — Differt ostiolis globoso-cylindraceis, distincte sulcatis, obtusis — Hab. in Streblo aspero (Moraceae), nec non in Antides mate Bunio (Euphorbiaceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO).

12. Diatrype Standleyi Ch. E. Fairman, Mycologia 10., 1918, p. 240.—5729 Stromatibus sparsis quandoque coalescentibus, parvis, pulvinatis v. verruciformibus, 1,5 mm. long., acute ellipsoideis v. lanceolatis, immersis dein erumpentibus, intus primum sordide albis dein hic inde ferrugineis demum brunneis, extus rugosis, nigris; peritheciis 1-15 subcircinnatim v. irregulariter dispositis 0,25-0,5 mm. diam., parietibus crassis, ostiolis prominentibus radiatim apertis, disco rugoso; ascis clavatis longe stipitatis 8-sporis, 70-125 × 7-8; sporidiis allantoideis apice distichis infra monostichis, rectis v. curvis, hyalinis dein flavescentibus, 10-13 × 3-3,5.

Hab. in ramis emortuis Cercocarpi montani (Rosaceae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

13. Diatrype cerasina Rehm, Ascom. Exsice. fasc. 53 n. 2066, Ann. Mycol. XI, 1913, n. 394.— Stroma in cortice denigrato serpens, acervulos peritheciorum includens, inde stromata gregaria, cortici innata, conoidea vel oblonga, 3-5 mm. lata, atra, dein ab peridermio transversim fisso arcte cineta prorumpentia intus albolutea formans. Perithecia in quoque stromate 20-30, 1-sticha, globoso-oblonga, 0,25 mm. lata, nigra, collis longis in disculum 1,5-3 mm. lat. orbicularem vel ellipticum, nigro-fuscum abeuntibus; ostiola globulosa plus minusve prominentia, demum distincte sulcata, obtusa, 0,5 mm. alt. Asci fusiformes, sessiles, c. 60 × 12, 8-spori. Sporae allantoideae, hyalinae, 12-17 (-20) × 4-5, saepe valde curvatae, distichae. Paraphyses nullae.

Hab. ad ramos dejectos, dein exsiccatos Cerasi avium (Rosaceae), prope Königstein, Saxonia (KRIEGEE).— Diatr. grandis (Nke) Berl. e D. Ailanthi Sacc. proxima.

14. Diatrype tumidella Peck in N. Y. State Mus. Bull. 167, 1912, p. 5
40 (1913).— Stromatibus orbicularibus, disciformibus vel convexis,
1.2 mm. latis, linea atra ad lignum penetrante cinctis, epidermidis
ruptae fragmentis cinctis, primum pallide brunneis, demum nigris,
ostiolis sulcatis punctatis, intus albidis; peritheciis monostichis,
atris, 4-12 in quoque stromate; ascis subclavatis vel cylindraceis,
p. sp. 35-50 × 8-10; sporidiis confertis vel subdistichis, rectis vel
leniter curvis, atrinque obtusis, fuscis, 10-20 × 4-5.

Hab. in ramis emortuis Pruni pennsylvanicae (Rosaceae), Quebec, Canada (W. P. FRASER). — D. tumidae E. et E. proxima; differt stromatibus minoribus, ascis et sporidiis latioribus.

15. Diatrype patella Rehm, Ann. Mycol. XI, 1913, p. 155.— Stromatibus dispersis, erumpentibus, orbicularibus, plerumque apice plana discoidea, rarius subconvexulis, in ligno late denigrato sessilibus, peridermium elevantibus, demum disrumpentibus, ab ejusque laciniis adhaerentibus saepe obtectis, atris, 1-2,5 mm. diam., 1,5 mm. altis, in medio disculi submarginati ostiolis conoideis, integris, prominentibus; peritheciis monostichis, arcte stipatis, globulosis, 5-12 × 0,25-0,5 mm. diam.; ascis subfusiformibus, longe stipitatis, p. spor. 30 × 5, octosporis; sporis allantoideis, distichis, dilute flavidulis, 7-9 × 2; paraphysibus filiformibus.

Hab. ad ramos Pruni Virginia na e (Rosaceae), London Ont., Canada, Amer. bor. (J. Dearness). — Diatr. macrotheciae Sp. proxima.

- 16. Diatrype microstroma Syd. et Hara, Ann. Mycol. X (1912), p. 407. 3 Hab. in ramis emortuis corticatis R h o is silvestris (Anacardiaceae), et P a u l o w n i a e t o m e n t o s a e (Scrophulariaceae), Prov. Mino, Japoniae (HARA). Var. minor Sacc., Ann. Mycol. XI, 1913, p. 314. Stromatibus minoribus, vix 1 mm. diam., peritheciis paucis, 250 μ diam., ascis 30-40 × 5,5-6, stipite 10-12 μ longo; sporidiis 9-11 × 2, olivascentibus. Hab. in ramis corticatis P i r i s i n e n s i s (Rosaceae) et M a g n o l i a e sp. (Magnoliaceae), Prov. Mino, Japonia (HARA).
- 17. Diatrype Clerodendri Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2215.— Stromatibus gregariis, ex basi dilute denigrata subcorticali erumpentibus, dein peridermio laciniato cinctis, tuberculiformibus, 1-1,5 mm. latis et altis, extus atris intus

vix albidulis; peritheciis avervulatim collectis, eirc. 12, monostichis, globulosis, in collum elongatis, ostiolis disco nigro conoideis, distincte sulcatis, 150  $\mu$  diam.; ascis clavatis, longe tenuiter stipitatis, p. sp. 20  $\approx$  5-6, aparaphysatis; sporidiis allantoideis, dilute flavido-cinereis, 5-7  $\approx$  2-2,5.

Hab. in Clerodendrone Thompsoniae (Verbenaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). — Affinis D. Saccardoi a qua differt imprimis stromatibus intus albo-pruinosis.

18. Diatrype velata Rehm, Ann. Mycol. XI, 1913, p. 400. — Stroma 5735 sub cortice in ligni superficie effusum, acervulos amplectens. Acervuli peritheciorum plerumque longitudinaliter cortici immutato innata, 1,3-5 mm. long., ab eoque adhaerente fere obtecta, apice albescentia, vix prominentia, intus alba. Perithecia c. 10 connata, globulosa, 0,2 mm. diam. in collum elongata, ostiolis minimis subglobosis prominentia. Asci subclavati, longe stipitati, c. 95 μ lg., p. sporif. 25 × 7, 8-spori. Sporae allantoideae, flavidulae, 10 × 2. Paraphyses filiformes, -6 μ lat.

Hab. ad ramos?, Tiflis hortus botan., Caucasus (Newodowski). Diatr. Daldiniae De Not. valde affinis.

**DIATRYPELLA** Ces. et De Not.— Syll. I p. 200, IX p. 477, XI p. 277, XIV p. 488, XVI p. 427, XVII p. 572, XXII p. 370.

1. Diatrypella Barleriae Syd., Ann. Mycol. 14., 1916, p. 361.— Stromatibus sparsis, erumpentibus, pulvinatis, orbicularibus, parte inferiore peridermii laciniis arcte cinctis, 1-1,5 mm. diam., atris; disco planiusculo vel parum convexo; peritheciis 8-15 in quoque stromate, submonostichis, in collum longiusculum attenuatis; ostiolis non vel perparum exsertis, depressis, umbilicatis, nitentibus; ascis clavatis, longiuscule pedicellatis, p. sp. 50-60 × 8-13, paraphysatis, polysporis; sporidiis allantoideis, leniter curvatis, in cumulo flavidulis, singulis fere hyalinis 5-6 × 1,5.

Hab. in ramis Barleriae cristatae (Acanthaceae), Los Baños, ins. Philipp. (C. F. BAKER).

2. Diatrypella minutispera Dearn., Mycologia, 9., 1917, p. 345.—Stromatibus sparsis, gregariis v. seriatis, minutis, 1 mm. basi latis, subsuperficialibus, corticem non atrantibus, rimose erumpentibus; peritheciis nigris basi stromate brunneo expanso insidentibus, 0,2 mm. diam., superne nitidulis, truncato-conicis, 3-5 in quoque stromate; ostiolis brevibus, obtusis, perforatis; ascis stipitatis, obtuse

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fusoideis,  $60.75 \times 12$  p. sp., stipite 30.40 p long.; paraphysibus filiformibus interdum asco duplo longioribus; sporidiis innumeris, hyalinis, perexiguis, rectis curvulisve,  $3.3,5 \times 0,5.0,7$ .

Hab. in ramis emortuis Coryli rostratae (Betulaceae), Washington, Amer. bor. (S. H. BURNHAM).

3. Diatrypella Abietis Lind, Dan. Fungi, p. 250 t. IV f. 47-48 (1913).— 573 Acervulis gregariis obtuse conicis sub epidermide plerumque pustulatim elevata nidulantibus ex peritheciis 10-15 circinantibus efformatis, epidermide rupta arcte cinctis, intus pallidis; peritheciis minutis e globoso depressis ½ mm. diam., monostichis, dense stipatis, mutuaque pressione angulatis, basi in stromate a matrice formato immersis, ostiolis parum v. vix prominulis instructis, in disculum album erumpentibus; ascis anguste elavatis, 44-50 × 4-7, polysporis, sporidiis curvulis, hyalinis, 4-6 × 0,7-1.

Hab. in cortice trunci emortui Abietis albae (Coniferae), in Dania.

4. Diatrypella Psidii Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 573 of Sci. VIII (1913) p. 487. — Stromatibus sparsis vel laxe aggregatis, tuberculari-erumpentibus, 0,8-1,8 mm. diam., rotundatis, atris, cortice fisso arcte cinctis, opacis, rugulosis; peritheciis 5-12 in singulo stromate congestis, globosis vel lateraliter compressis, 300-450 μ diam., ostiolo papilliformi, conico, brevi vel saepe etiam plus minus elongato donatis; ascis clavatis, apice late rotundatis, p. sp. 50-60 × 10-16, polysporis; sporidiis allantoideis, hyalinis vel subhyalinis, in cumulo flavo-brunneolis, rectis vel leniter curvatis, 5-6,5 × 1-1,5.

Hab. in ramulis Psidii guajavae (Myrtaceae), Luzon, Bontoc Subprov., ins. Philipp. (VANOVERBERGH).

- CRYPTONECTRIOPSIS v. Höhnel, Ann. Mycol. 16., 1918, p. 36; 17., 1919, p. 131. Perithecia collo et stromate destituta, parasitica in peritheciis vetustis. Sporidia continua hyalina. Gen. Mazzantiae proximum. Typ. gen. (ut Subgen. Hyponectriae habendum):
- 1. Cryptonectriopsis biparasitica v. Höhn., l. c.— Peritheciis e pallidis 574 brunnescentibus indistincte parenchymaticis apice papillato-ostiolatis; paraphysibus filiformibus aegre perspicuis, ascis cylindraceis v. clavato-fusoideis, 55·72 × 3·8; sporidiis ellipsoideis subinaequilateris v. curvulis, submonostichis, 7·9 × 3·4.

Hab. parasitica in peritheciis Leptosphaeriae dolioloidis (enfr. Rehm, Ascom. exsicc. n. 1523 sub Phomatospora ovalis (Pass.).

# Sect. 2. Hyalosporae

CRYPTOSPORELLA Sacc. — Syll. 1 p. 466, IX p. 609, XIV p. 525, XVI p. 468, XVII p. 592, XXII p. 372.

Cryptosporella viticola Shear, Phytopathology, I (1911) p. 119, c. 5741
 icon. — Stromatibus irregulariter pulvinatis, perithecia plura complectentibus; peritheciis globulosis, excipulo proprio tenui donatis, in collum breve crassiusculum, vix exsertum productis; ascis cylindraceis, subsessilibus, 60-72 × 7-8, paraphysibus filiformibus, longioribus, septatis obvallatis; sporidiis ellipsoideis, obtusis, hyalinis, continuis, 11-15 × 4-6. Status pycnidicus Fusicoccum viticola Redd.

Hab. in sarmentis Vitis viniferae (Vitaceae), in America boreali.

- DICARPELLA Syd., Ann. Myc. 18., 1920, p. 181.— Syn. Disperma Theissen, Verh. zool.-bot. Ges. Wien, Bd. 66., 1916, p. 390 nec B. Clarke 1899.— Perithecia immersa apice tantum collo cylindraceo prominula, membranacea stromate destituta. Asci parietales varie pedicellati pluristratosi, sporidis binis praeditis. Paraphyses nullae. Sporidia elongata continua hyalina. Sec. v. Höhnel (Ann. Myc. 17, 1919, p. 131) ad Diaportheas pertinet.— Typ. gen.:
- Dicarpella bina (Harkn.) Syd., Ann. Mycol. 18., 1920, p. 181. 5742
   Disperma binum Theiss., l. c. tab. fig. 13-14, Physalospora Harkn.,
   Syll. IX p. 595. Aseis bisporis, aliis clavatis sessilibus 55-65 ×
   17-19, aliis ellipsoideis 45-50 × 20, pedicello tenui usque 50 × 2-3
   donatis; sporidiis elongato-ellipsoideis utrinque rotundatis 18-22 ×
   9-10 (Cufr. Theissen, L.c.).

# Sect. 3. Phaeosporae

- ANTHOSTOMA Nits. Syll. I p. 293, IX p. 514, XI p. 283, XIV p. 503, XVI p. 441, XVII p. 635, XXII p. 372.
- Anthostoma Flagellariae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2216. Stromate entypeo, late effuso, cinerascente, in superficie matricis laevigatae maculas confluentes obscurius marginatas oblongas formante, ostiolis sparsis vix papillulatis nigro tinctis, 200-300 μ latis punctulato, glabro; peritheciis ligno immutato innatis, 0,5 mm. latis, plerumque solitariis, rarius 2-3 congregatis, non seriatis, excipulo tenuissime parenchymatico;

ascis cylindraceis apice rotundatis,  $100 \times 10\cdot 12$ , octosporis, J ; paraphysibus filiformibus 1,5  $\mu$  er. submucosis; sporidiis monostichis, oblongis, utrinque rotundatis, demum obscure fuscis,  $15 \times 5\cdot 7$ .

Hab. in culmo emortuo Flagellariae in dicae (Flagellariaceae), Luzon, Prov. Laguna, Los Baños. ins. Philipp. (S. A. Reyes).

2. Anthostoma (Sphaeranthostoma) sphaerospora v. Höhm., Fragm. zur 5744 Mykol. 767, in Stzgsb. Akad. Wiss. Wien CXXI, 1, p. 384 tab. I fig. 2 (1912). — Stromatibus valsoideis, gregariis, cortice innatis, pustuliformibus, 0,5-1,3 mm. diam., 800 μ circ. altis, disco luteobrunneo ostiolis punctulato; peritheciis in quoque stromate 1-6, in substantia stromatica suberosa brunneola immersis, globoso depressis, 400-500 μ latis, collo 400 μ longo, 140-200 μ crasso, periphysibus copiosis clauso praeditis; ascis crasse clavatis, apice rotundatis, basi breviter attenuato pedicellatis, 100-120 × 32-42, paraphysibus filiformibus copiosis cito diffluentibus obvallatis; sporidiis plerumque distichis, obscure brunneis, vix pellucidis, globosis, levibus, intus minute granulosis, interdum grosse 1-guttatis, 15-24 (plerumque 18-20) μ diam.

Hab. in ramis siecis corticatis Albizzia e moluccana e (Leguminosae), in horto botan. Buitenzorg, Java. — Ob sporidia majuscula globosa perdistinctum et novi subgeneris typus.

3. Anthostoma Visci (Kalchbr.) Sacc., Notae Mycol. XX, Nuovo Giorn. 5745 bot. it. 23., 1916, p. 224; Syll. Fung. I p. 293 (Anthostomella). — Perithecia gregaria v. acervulata, cortice nidulantia, majuscula, 500-600 μ diam. crasse tunicata, ostiolo obtuso papillato erumpentia, stromate nigro corticali connexa (hinc potius Anthostoma quam Anthostomella); hyphis stromatis tortuosis ramosis intertextis brunneis, septatis, 7 μ cr.; nucleo perithecii albo dein subolivaceo. Asci ampli oblongi v. elongati varii, 170-180 × 20-22, v. 140-150 × 35, v. 100 × 28, apice rotundati, breviter stipitati, initio crasse tunicati, 4-8-spori, paraphysibus mucosis, intus granulosis, hyalinis evanidis obvallati; sporidia oblique monosticha v. disticha, majuscula, ellipsoidea, utrinque acutula, 35-36 × 18-20, initio strato angustissimo mucoso obvoluta, olivaceo-fuliginea.

Hab. in caulibus emortuis V i s c i a l b i (Loranthaceae), pr. Rigny, Galliae (Flageolet).

4. Anthostoma megalosporum Rehm, Ascomyc. Philipp. IV, Leaflets of 5746 Philipp. Botany, VI (1913) p. 1941. — A.? gigasporum Rehm, loc. cit. p. 1940, non Cke. et Harkn. — Rosellinia? gigaspora Ell. et

Ev. -- Syll. XI p. 280. — Peritheciis in areis cariosis ligni  $2\times 1$  cm. late denigrati gregarie innatis, dein dimidia parte emergentibus, conoideis, minutissime papillulatis, atris, glabris, subnitentibus, 0,5 mm. diam., carbonaceis; ascis fusiformibus, octosporis,  $250\times30$ ; paraphysibus filiformibus, septatis, 3  $\mu$  cr.; sporidiis 2-3-stichis, oblongo-fusoideis, rectis, utrinque acutatis, haud guttatis, subfuscis,  $80\times12$ .

Hab. in caule emortuo Paramignyae longiped une ulatae (Rutaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

5. Anthostoma solanicola P. Henn., Hedw. vol. 48 (1908) p. 10. — Peritheciis caespitosis, sub epidermide fissa nidulantibus, conicis vel ovoideis, atris, ad basim hyphis atro-fuscis, septatis, 3-7 μ crassis circumdatis; ascis clavatis vel oblongis, octosporis, 80-110 × 25-30, paraphysibus filiformibus, 2 μ cr., copiosis obvallatis; sporidis subdistichis, ellipsoideis, atro-brunneis, continuis, 20-30 × 15-18.

Hab. in ramis Solani paniculati (Solanaceae), prope Capital, S. Paulo, Brasilia.

HAPLOSTROMA Syd., Ann. Mycol. 14., 1916, p. 80 (Etym. haplos simplex et stroma). — Stromata sub epidermide evoluta, eam disrumpentia et dein strato subepidermale fere superficialiter insidentia, atra plerumque 1-locularia, rarius paucilocularia, contextu indistincte celluloso subopaco. Perithecia pariete proprio fibroso dilutiore molliusculo praedita, ostiolo breviter papilliformi. Asci cylindracei, paraphysati, octospori. Sporidia elliptica, continua, hyalina, tandem leniter brunneola.

1. Haplostroma depressum Syd., l. c. — Stromatibus hypophyllis, in 5748 epiphyllo maculas vix decoloratas sed conspicue profundeque depressas orbiculares 2.4 mm. diam. efficientibus, dense aggregatis, ca. 8-20 in quoque plagula, rotundatis vel parum irregularibus, superficie rugulosis, sub epidermide evolutis. eam disrumpentibus et tandem strato subepidermali fere superficialiter insidentibus, opace atris, 350 × 500 latis, 250-320 μ altis subinde confluentibus; peritheciis singulis vel pancis in quoque stromate, applanato-globosis pariete proprio molliusculo fuscidulo 10·15 μ crasso fibroso ex hyphis numerosis tenuibus ca. 1,5 μ crassis composito, ostiolo breviter papilliformi; ascis cylindraceis, apice obtusis, 100-135 × 10-12, octosporis; paraphysibus numerosis, simplicibus, hyalinis, 1-1,5 μ crassis; sporidiis recte vel oblique monostichis, ellipticis,

utrinque rotundatis, continuis, hyalinis, tandem dilute brunneolis, 14-16 × 8-10.

Hab. in foliis Mieoniae sp. (Melastomataceae), Serra do Mairary, Rio Branco, Brasiliae (E. ULE).

#### LOPADOSTOMA (Nits.) Trav. - Syll. XXII p. 374.

1. Lopadostoma gallicum Sacc., Notae Myc. XXII (Acc. Pad. 1917) p. 5749 159. — Stromatibus laxe sed late gregariis, subcorticalibus, mox prominenter erumpentibus, conico-pulvinatis, basi 2 mm. latis, peridermio arcte cinctis, linea nigra circulari intus circumdatis; peritheciis ligno partim infossis, globosis, 0,5-0,7 mm. diam., 10-16 in quoque acervulo, monostichis, nigris, extus leviter albo-pruinosis; ostiolis fasciculatis conicis, plus minusve emergentibus, integris; ascis tereti-clavatis, apice rotundatis, deorsum sensim in pedicellum crassiusculum 14-15 μ longum tenuatis, 45 × 6, filiformibus paraphysatis, octosporis; sporidiis oblongo-ellipsoideis, leviter inaequilateris, utrinque rotundatis, 7,5 9 × 3,5-4, olivaceo-brunneis plerumque 2-guttatis, monostichis v. pro parte distichis.

Hab. in ramis crassioribus, corticatis emortuis. A c e r i s. P s e u-d o p l a t a n i (Aceraceae), Rigny, Gallia (FLAGEOLET). — Affine Lop. turgido a quo imprimis ascis multo brevioribus distinguitur.

 Lopadostoma Massarae (De Not.) Trav., Pyr. Fl. ital. p. 172, An. 5750 thostoma Massarae (De Not.) Sace. — Syll. I p. 306. — Sace., Notae Mycol. XXII p. 175 (Accad. Pad. 1917).

Hab. (adde) in cortice ramorum Quercus sp. (Cupuliférae), Kawauye, Japonia (HARA).—Sporidia ellipsoideo oblonga 18-20  $\times$  7-8; asci jam resorpti. Notis nullis a typo italico differre videtur, etsi in plaga tam distante; ceterum quam infiniti sunt fungi cosmopolitae!

#### Sect. 4. Hyalodidymae

MELANCONIS Tul. — Syll. I p. 602. IX p. 700, XIV p. 543, XVI p. 492, XVII p. 667, XXII p. 375.

1. Melanconis alnicola Jaap, Ann. Mycol. 15., 1917, p. 107. — Stromatibus gregariis, ramos ex integro occupantibus, depresse pustulatis, rotundatis, 2-3 mm. latis, peridermio tectis, demum disco albido v. griseo erumpentibus, intus flavo griseo; peritheciis 4-8 circinantibus et collis longis conniventibus, apice globosis, nigris discum leviter superantibus; ascis tereti-clavatis, apice rotundatis, sessili-

bus,  $50\text{-}60 \times 15$ , octosporis; sporidiis distichis, elongato-fusoideis, rotundatis, rectis curvulisve,  $25\text{-}45 \times 9\text{-}12$ , bicellularibus, hyalinis, exappendiculatis.

Hab. in ramis emortuis Alni incanae (Betulaceae), Grindelwald, Helvetiae. — Affinis M. Alni gaudet sporidiis minoribus et appendiculatis.

2. Melanconis faginea Sacc., Notae Mycol. XXII (Acc. Pad. 1917) p. 5752 160. — Stromatibus densiuscule gregariis, subcutaneis, pustulatis, conico-depressis, 1-1,5 mm. diam.; peritheciis in quoque stromate 6-10 circinantibus, globulosis, 300 μ diam., nigris, ostiolis in disculum punctiformem nigrum erumpentem desinentibus; ascis clavatis 95-100 × 12, subsessilibus, octosporis; sporidiis distichis, oblongofusoideis, saepe inaequilateralibus, 19-21 × 6-7, uniseptatis non v. vix constrictis, 2-guttatis, hyalinis; appendicibus cuspidatis, 6-7 × 2, hyalinis, utrinque acutis.

Hab. in ramulis corticatis emortuis F a g i s i l v a t i c a e (Fagaceae), Rigny, Gallia (Flageolet). — Peraffinis Mel. Alui, a qua differt sporidiis ascisque paullo angustioribus, et appendicibus brevioribus, praetereaque matrice diversa.

3. Melanconis Cytisi Naoumoff, Bull. Soc. Myc. Fr. 1914 p. 384 t. XX 5753 f. 4-5 et Soc. Oural. Amis Sc. Nat. XXXV (1915) p. 23 extr., tab. 1 fig. 10.— Peritheciis glabris, nigris, globosis vel globoso-depressis, 350-630 μ diam., sine stromate distincto irregulariter acervatis, sub peridermio nidulantibus, ostiolis altis, rectis, cylindraceis vel apice attenuatis, 750 × 120-200; ascis teretibus, breve pedicellatis, 96 × 14, paraphysibus filiformibus obvallatis; sporidiis oblique monostichis, ellipsoideis, medio 1-septatis, non constrictis, hyalinis, 14-18 × 8,5-9.

Hab. in ramis emortuis Cytisi ratisbonensis (Leguminosae), Gub. Perm in Rossia.

NEOKEISSLERIA F. Petrak, Ann. Mycol. 17., 1919, p. 87. — A Cerio- 5754 spora et Melanconis differt peritheciis in stromate aggregatis, subepidermicis dein superficialibus parietibus crassis praeditis. — Status pycnidicus ignotus.

Typus huius generis sec. Petrak est Melanconis ribis (P. Henn. et Ploettn.) Sacc., Syll. XXII p. 376.

MACRODIAPORTHE F. Petrak, Ann. Mycol. 17., 1919, p. 94. — Stroma 5755 in parte superiore peritheciorum tantum evolutum et tunc perithecia basi distincta. Asci 8-spori pseudoparaphysati; sporae magnae. —

Typus huins generis secundum Petrak est Melanconis occulta (Fuck.) Sacc., Syll. 1 p. 605 (= Mel. apocrypta Ell. in Ell. et Ew., Diaporthe abnormis v. Höhn. 1917).

CHOROSTATE (Sace.) Trav. - Syll. XXII p. 376 et I p. 607, IX p. 702, XI p. 307, XVI p. 492 (ut subg.).

1. Chorostate inornata (Peck) Saccardo, Diaporthe inornata Peck in 5756 N. Y. State Mus. Bull. 157 (1911) p. 47 et 109 (1912). - Stromatibus valsoideis, 1-1,5 mm. latis, in cortice interiore nidulantibus; peritheciis 4-14 caespitosis, nigris, 300 g latis, linea nigra nulla circumscriptis, ostiolis longis, confertis, discum perforantibus et obliterantibus, erumpentibus, epidermide rupta cinctis; ascis subfusiformibus, 60-80 \* 8-10; sporidiis confertis, oblongis vel subfusiformibus, utrinque seta brevi auctis, ad septum constrictis, 2-4guttulatis,  $15.24 \times 3.4$ .

Hab. in ramis emortuis Rhois typhinae (Anacardiaceae), in Maryland, Amer. bor. - Affinis D. syngenesiae (Fr.) Fekl.

2. Chorostate valsiformis Rehm, Diaporthe valsiformis Rehm, ad int., 5757 Ann. Mycol. XI, 1913, p. 152. — Diap. Mamianiae Sacc. qua proxima differt « rostella seorsum spiniformi-emergentia, recta v. curvata, saepe divergentia ».

Hab. ad ramos Alni glutinos are (Betulaceae), prope Mährisch-Weisskirchen, Moravine (PETRAK). - f. valsoidea Rehm in litt. ad Voss 1891 et in l. c. p. 153. — Differt stromatibus minoribus, 6-8 péritheciis praeditis, sporis  $18-21 \times 4-4.5$ .

Hab. ad ramos Alni viridis, prope Ulrichsberg, Krain (Voss).

3. Chorostate Ailanthi Sacc. - Syll. I p. 621 - var. Viburni Dearness 5758 et House, N. York St. Mus. Bull. n. 188, p. 30 (1916). - A typo differt praecipue sporidiis non constrictis. — Peritheciis circ. 360 μ diam., ascis  $45.60 \times 6.9$ , sporidiis 4-guttulatis  $11-15 \times 3-3.5$ .

Hab. in ramis emortuis Viburni dentatae (Caprifoliaceae), Sylvan Beach, Oneida County, N. Y., Amer. bor. (H. D. House)

4. Chorostate anceps Sacc., Ann. Mycol. XII, 1914, p. 288. - Stromatibus 5759 laxe gregariis cortice lignoque subimmutatis nidulantibus et leviter pustulatum elevantibus, depresso-conoideis, nigris, 0,7-1 mm. diam., dein rimose erumpentibus, linea nigra stromatica profunde et late excurrente praeditis; peritheciis saepe in quoque stromate numerosis plus minus stipatis, globulosis, nigris, 300 µ diam., longicollibus, ostiolis parum elevatis, rotundatis, atro-nitidulis, in discum

conjunctis; ascis fusoideis, sessilibus, aparaphysatis,  $48-50 \times 6-7.5$ , octosporis; sporidiis fusoideis rectis  $10 \times 11$ , tetrablastis, strato tenui mucoso initio obductis, dein lenissime constrictis, hyalinis.

Hab. in ramis morientibus Viburni Lantanae (Caprifoliaceae), M. Weisskirchen, Moravia (F. Petrak). — Interdum perithecia subdiscreta, hine species ad Diaporthem nutat.

5. Chorostate Batatae (L. L. Harter et E. C. Field) Sace., Diaporthe Batatatis Hart. et Fid., Phytopathology, II, p. 124 (corr. Batatatis) e.ic.—Stromatibus valsoideis, immerso-erumpentibus, extus atro-carbonaceis, intus cinereis; peritheciis in quoque stromate 9-25, subglobosis, immersis, 120-370 μ diam.; rostellis subcylindricis, exsertis, 3-5 mm. altis; ascis clavato-cylindraceis, sessilibus, aparaphysatis, 23-38 × 7-12; sporidiis plerumque distichis, subcllipsoideis, utrinque obtusis, hyalinis, medio septatis et leviter constrictis, 2-4-guttulatis, 8-12 × 4-6. Status pyenidicus Phoma (Phomopsis) Batatae Ell. et Halst. Hab. in radicibus, caulibus et foliis I p o m o e a e B a t a t a e

Hab. in radicibus, caulibus et foliis I pomoeae Batatae (Convolvulaceae), Washington, Amer. bor.

6. Chorostate utahensis Sacc., Mycologia, 12., 1920, p. 202.—Stromatibus erumpentibus, prominulis, pulvinatis, 1,5 mm. diam., nigricantibus; peritheciis numerosis, monostichis, 0,3 mm. diam., globosis, ostiolis punctiformibus, vix extantibus; ascis cylindraceis apice rotundatis, ibique non v. vix lumine bifoveolatis, breviter stipitatis, 55-60 × 7,3-8, aparaphysatis, octosporis, sporidiis oblique monostichis, oblongo-clavatis, curvatis, 12-14 × 3-6, eguttulatis, hyalinis, constricto-1-septatis.

Hab. in ramis corticatis Quercus utahensis (Cupuliferae), Ft. Douglas, Utah, Amer. bor.— Affinis C. teiphaemae, differt sporidis curvis, loculo super. crassiore rotundato, ascis angustioribus, ostiolis abbreviatis.

7. Chorostate suspecta Sacc., Ann. Mycol. XI, 1913, p. 15.— Stromatibus gregariis, subcutaneis, leviter pustulatim prominulis, disculo tantum erumpentibus, subcircularibus, 1-2 mm. diam. intus flavidulo-olivaceis; peritheciis irregulariter circinantibus, globosis, in quoque stromate paucis, 4-8, mm. 0,5 diam. nigris, collis oblique convergentibus in ostiola punctiformia desinentibus; ascis elongatofusoideis, subsessilibus, sursum obtuse tenuatis, aparaphysatis, octosporis, 90-100 × 10-12, apice bifoveolatis; sporidiis oblique monostichis, breviter fusoideis, 16 × 6-6,5, initio continuis, dein constricto-1-septatis, biguttulatis, hyalinis.

Hab. in ramulis corticatis Fagi silvaticae (Fagaceae),

Forbach in Lotharingia (A. Ludwig). — Ab affinibus Chor. decipiente, Chor. mucosa etc. satis distincta.

8. Chorostate peckiana Sacc., Notae Myc. XX, Nuovo Giorn. bot. it. 5763 N. S. 23., 1916. p. 187.— Stromatibus gregariis, corticolis, subcutaneo-erumpentibus, depresse pulvinatis, 0,7·1 mm. diam., ambitu circulari nigrolimitato; peritheciis in quoque stromate 6·8 globoso-depressis, circinatis, 250·300 μ lat., ostiolis obtusulis vix extantibus, nigris; contextu sinuoso-parenchymatico, olivaceo-fusco; ascis fusoideis, subsessilibus. 47·50 × 11·12, aparaphysatis, octosporis, apice obtusulo, lumine obsolete foraminulato; sporidiis fusiformibus, utrinque acutulis, subrectis, hyalinis, farctis (non guttulatis), 12·13 × 3,5, subdistichis.

Hab. in cortice subemortuo Fraxini? americanae (Oleaceae), Catskill mits. N. Y., Amer. bor. (C. H. Peck).

9. Chorostate tuberculosa (Ell.) Sacc., Syll. I p. 620.— var. Pruni Dear-5764 ness et House, N. York St. Mus. Bull. n. 188, p. 31 (1916). — A typo differt peritheciis minus immersis, stromate magis profunde immerso et e superficie ligni anulatim elevato et 2-5 mm. diam.

Hab. in ramis emortuis Pruni serotinae (Rosaceae), Oneida, Madison Co. N. Y., Amer. bor. (H. D. House).

10. Chorostate Macounii (Dearn.) Sacc.. Diaporthe Macounii Dearn., Mycologia, 1916 p. 100.—Stromatibus numerosis, minutis, 0,5-0,8 mm. substellatim erumpentibus, pustulis interdum deciduis et corticem flavidum revelantibus, lignumque leviter atrantibus, linea tamen nulla nigra circumscriptis; peritheciis singulis v. 2-6 in stromate, 90-275  $\mu$  diam., ostiolis vix perspicuis; ascis fusoideis,  $30-35 \times 6-7$ ; sporidiis irregulariter biseriatis; hyalinis,  $8-9 \times 2.5$ , nucleatis, obscure 1-septatis, loculis interdum secedentibus, uno saepe minore.

Hab. in ramis emortuis Spiraeae Mengiesii (Rosaceae), in Insula Vancouver, Columbiae (J. Macoun).

11. Chorostate sorbicola (Bref.) Sacc. et Trott., Syll. XXII, p. 376, Sacc. 5766 Ann. Mycol. XIII n. 2 (1915) p. 130, non Diap. sorbicola Schröt. quae est Diap. patria Speg. — Stromata valsea, conoidea-depressa, 2 mm. lat.; perithecia 250-300 μ diam., intus olivaceo-fusca, ostiolis globulosis erumpentibus, in discum atrum connexis. Asci tereti-fusoidei, subsessiles, 70-76 × 11-12; sporidia disticha majuscula, grosse 4-guttata, tereti-oblonga, utrinque rotundata, subrecta, 23 × 7, hyalina. — Diap. patria Speg. (1881) est microspora et ejus verisimiliter synonyma sunt Diap. Aucupariae Hazsl. (1892) et Diap. Woroninae Jacz. (1896).

Hab, praeter loco citata, in Moravia (PETRAK).

12. Chorostate melaena Rehm, Ann. Mycol. XI, 1913, p. 152. — Pseudostromatibus gregariis, in cortice extus late denigrato nidulantibus, eumque protuberantibus, demum perforantibus, intus stromate nigro obtectis, conoideis, obtusis, 1-2 mm. lat.; peritheciis in cortice infer. monostichis, 10-12 arcte congregatis, globulosis, 0,5 mm. lat., in collum cylindraceum attenuatis, collis convergentibus in discum atrum epidermidis laciniis arcte adhaerentibus cinctum, ostiolis prominulis plus minusve coalitis, hemiglobosis; ascis fusoideis, 45-50 × 8, octosporis; sporis fusoideis, utrinque obtusis, medio hand constrictis, rectis, 4-guttatis, demum? triseptatis, hyalinis, 12-14 × 3-3,5, distichis.

Hab. ad ramum putridum Tiliae platyphyllae (Tiliaceae), in horto regio Gross Sedlitz, Saxoniae (W. KRIEGER).

13. Chorostate pustulata (Desm.) Sacc., Ann. Mycol. XII, 1914, p. 288.— 5768

Ita vocanda est Diaporthe pustulata Desm., Sacc. Syll. I p. 610.

APIOPORTHE v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 249; 5769 (nom. nndum); Fragmente z. Mykol. 1049, in Sitz. k. Ak. d. Wiss. Wien 1917. Huc pertinent; sec. v. Höhnel, Diatrype anomala Peck et Dothidea virgultorum (Fr.) Fuk.

**DIAPORTHE** Nits. em.— Syll. I p. 606, 1X p. 702, XI p. 307 XIV p. 5770 543, XVI p. 492, XVII p. 667, XXII p. 378.

#### I. Euporthe

1. Diaporche lagunensis Sydow, Ann. Mycol. 18., 1920, p. 99.—Stroma 5771 nullum manifestum; perithecia pauca (2-4) in acervulos minutos usque 0,5 mm. longos caulem longe lateque ambientes diu epidermide tectos tandem eam disrumpentes collecta, 150-200 μ diam., linea nigra nulla conspicua, nucleo albo; asci aparaphysati, cylindraceo fusoidei, p. sp. 40-50 × 6-9, octospori; sporae distichae, oblongae, utrinque leniter attenuatae, sed apicibus obtusis, medio 1-septatae, leniter constrictae, grosse 4-guttatae, hyalinae, 11-14 × 3-4.

Hab. in caulibus Allamandae Hendersonii (Apocynaceae), Los Baños, prov. Laguna, Ins. Philippin. (F. B. SERRANO).

Diaporthe Callicarpae Peck, N. Y. State Mus. Bull. 150 (1910) p. 5772
 53 (1911). — Stromate effuso, tenui, ligni superficiem nigrificante;
 peritheciis ligno immersis, vulgo 2-6, depresso-globosis, 300-500 μ

latis, nigris, ostiolis minutis ligni superficiem vix superautibus: ascis gracilibus, utrinque attenuatis, 60-80 × 6-8; sporidiis distichis, 4-nucleatis, 12-15 \* 3-4.

Hab. in caulibus emortuis Sambuci callicarpae (Caprifoliaceae), Rolling Bay, Washington, Amer. bor. (BARTHOLOMEW).

3. Diaporthe Evonymi Dearness, Mycologia, S., 1916, p. 99. - Stro- 5773 mate late effuso, interdum totos ramos circumdante, vel areas minutas 1-panciperithecigeras formante, corticem dealbante et lignum linea nigra circumscribente; peritheciis solitariis v. 2-4 aggregatis, non circinatis, pro parte ligno infossis, globosis, 270-500 µ diam., ostiolo conico-cylindrico 100 µ cr., 100-130 µ longo, peridermium perforante; ascis tereti-fusoideis, sessilibus, 8 sporis, para. physatis, 60-75 \* 11-15; sporidiis oblique monostichis v. subdistichis, oblongo-ellipsoideis, non constrictis, distincte 1-septatis, 12-15 × 6-7.

Hab. in ramis emortuis Evonymi atro-purpurei (Celastraceae), Delaware Ont., Canada (J. H. BOWMAN).

4. Diaporthe salinicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buc. 5774 nos Aires XXIII p. 54 (1912). - Peritheciis ligno corticato dealbatoque, nigro-limitato innatis, subseriatis, per corticis rimas ostiolis tenuibus breviter setuliformibus erumpentibus, globosis, 200-250 µ diam., membranaceis, sordide fusco-lutescentibus, in ostiolo gracili, 0,5-2 mm. longo, carbonaceo, exerto productis; ascis oblanceolatis, utrinque acuminatis, 50 \* 8, fluentibus; sporidiis oblique distichis, ellipsoideo biconicis, hyalinis, loculis aequilongis, saepins biguttulatis (mensurae desunt).

Hab. in caulibus aridis putrescentibusque Atriplicis pamparum (Chenopodiaceae) in horto botanico, La Plata, Argentina.

5. Diaporthe brenckleana Sacc., Mycologia 12., 1920, p. 202. - Peri- 5775 theciis laxe gregariis, ligno immutato sed linea stromatica percurso immersis, globosis, 350-500 μ diam., contextu minute celluloso atroolivaceo; ostiolis erumpentibus tereti-conicis parum extantibus; ascis fusoideis, apice rotundatis, 45-55 × 8-9, aparaphysatis, octosporis; sporidiis oblique 1-stichis, cylindraceo-fusoideis, utrinque rotundatis, 14 × 3,6, inaequaliter 4 guttulatis, hyalinis, leviter constrictis.

Hab. in ramis corticatis, interdum superficie atratis Cornistoloniferae (Cornaceae), Whitestone Gully, N. D., Amer. bor. A D. crassicoli ostiolo omnino diverso, etc. secedit.

6. Diaporthe Nepetae Gz. Frag., Trab. Mus. Nac. Cienc. Nat., ser. Bot. 5776 n. 4 (1914) p. 6 extr., fig. 1. — Pseudostromate effuso vel plerum-

que brevi, epidermide nigrificata tecto; peritheciis sparsis, gregariis vel hic inde subacervulatis, ligno insculptis, globoso-depressis, minutis,  $100 \cdot 175~\mu$  diam., branneis, ostiolo cylindraceo recto vel obliquo usque ad  $100~\mu$  longo, rostelliforme; ascis oblongis, basi attenuato-pedicellatis, apice foveolatis,  $50 \cdot 70 \approx 12$ ; sporidiis distichis vel subdistichis, ellipsoideis, utrinque subacutiuscule rotundatis, rectis, hyalinis, ad septum non constrictis, 4-guttulatis,  $10 \cdot 14 \approx 4.5 \cdot 5.5$ . Status pycnidicus verisimiliter *Phomopsis Nepetae* Gz. Frag., quod confer.

Hab. in ramulis caulibusque siccis Nepetae tuberosae (= N. violaceae) (Labiatae), in montibus Carpetanis, Hispania.

7. Diaporthe recondita Sacc., Notae Mycol. XX, Nuovo Giorn. bot. it. 5777 23., 1916, p. 204. — Peritheciis late sparsis minutis, ligno dealbato sed linea stromafica fortuosa eximie nigro-limitato nidulantibus, cortice parum mutato tectis, globulosis, 120-130 μ diam. ostiolo non extante punctiformi, collo subnullo; contextu celluloso, olivaeco-fuligineo; ascis tereti-fusoideis, sessilibus apice obtusulis, lumine bifoveolatis, 30-35 × 4,5-5; sporidiis distichis, oblongis, guttulatis (nondum maturis).

Hab. in ramis emortuis Gliricidiae maculatae (Leguminosae), Los Baños, Ins. Philipp.—Etsi sporidia non omnino matura bona Diaporthes species videtur.

8. Diaporthe rhamnigena Petrak, Ann. Mycol. XIII, 1915, p. 48.— Peritheciis late dispersis, saepe 2-4 dense gregariis, in cortice nigrocanescenti nidulantibus, ligno plus minusve, saepe omnino immersis, linea atra stromatica tortuosa per lignum excurrente signatis, globulosis, interdum paullum compressis, 0,4-0,5 mm. diam., membranaceo-coriaceis; ostiolis subcrassis, sub epidermide saepe quasi repentibus, parum erumpentibus; ascis cylindraceo-fusoideis sessilibus octosporis utrinque paullum angustatis, 50-60 × 5-6, aparaphysatis; sporidiis fusoideis rectis, 9-13 × 2,5-4, utrinque parum angustatis obtusulis, 3-4-septatis, ad septum medium tantum lenissime constrictis, 3-4 guttulas includentibus, hyalinis.

Hab. in ramis putrescentibus R h a m n i e a t h a r t i e a e (Rhamnaceae), inter frutices, ad rivum « Ludina » dictum prope urbem « Mähr.-Weisskirchen », Moraviae orientalis.

9. Diaporthe cydoniicola Petrak, Ann. Mycol. XIII, 1915, p. 49 et Fl. 5779 Boh. et Mor. exs. II Ser. 1., n. 1116. — Peritheciis in maculis parvis dispersis, raro confluentibus, dense gregariis, partim in cortice fere immutato, partim in ligno nidulantibus, magnis, interdum fere

#### II. Tetrastaga

15. Diaporthe petrakiana Sacc., Ann. Mycol. XII, 1914, p. 290. - Pe- 5785 ritheciis gregariis nunc discretis, nunc paucis acervulatis, in corrice nidulantibus, dein ostiolo breviter papillato erumpentibus, globulosis, 400 \mu diam., nigris, linea nigra stromatica tortuosa per lignum excurrente signatis; ascis fusoideis, sessilibus, 45-50 × 7-7.5, apice obtusulis bifoveolatisque, octosporis, aparaphysatis; sporidiis distichis fusoideis utrinque rotundatis, rectis, 11,5-12,5 × 3,5-4, quadriguttatis, ad septum indistinctum constrictis, hyalinis.

Hab. in ramis corticatis Aceris Pseudoplatani (Aceraceae), M. Weisskirchen, Moravia (F. Petrak).

16. Diaporthe pusilla Sacc., Ann. Mycol. XII, 1914, p. 289. -- Perithe- 5786 ciis laxiuscule gregariis, in cortice nidulantibus et parce erumpentibus, globulosis, breviter obtuse papillatis, 250 μ diam., linea atra stromatica per lignum excurrente signatis; ascis tereti-fusoideis, apice obtusulis bifoveolatisque, subsessilibus, 45-50 × 6-7, aparaphysatis, octosporis: sporidiis tereti-fusoideis, utrinque obtusis, 10-12 \* 3,5-4, quadriguttatis medio leniter constrictis, hyalinis.

Hab, in ramis morientibus Coryli Avellanae (Betulaceae), M. Weisskirchen, Moravia (Petrak). - Ab affini D. revellente dignoscitur peritheciis multo minoribus, aeque distributis, numquam valseo-aggregatis, ascis sporidiisque paullo brevioribus etc.

 Diaporthe celata Sacc., Notae Mycol. XXII (Acc. Pad. 1917) p. 160. — 5787 Peritheciis laxe gregariis globosis v. globoso-depressis in cortice immutato nidulantibus, 300-400 µ diam., ostiolo punctiformi papillato, vix erumpente; contextu perithecii celluloso rufo-fuligineo (non olivaceo); ascis fusoideis subsessilibus, apice obtusulis lumineque 2-foveolatis, 45-48 × 7-7,5, octosporis, aparaphysatis; sporidiis distichis, crassiuscule oblongo-fusoideis, 10-12 × 3-3,5, medio lenissime constrictis, 4-guttatis, apicibus initio subimperspicue-mucoso-apiculatis mox muticis.

Hab. in ramulis morientibus Thuyae (Coniferae), Rigny (Fla-GEOLET). - Linea stromatica nigra nulla, hinc, prae ceteris, species diversa a Diap. disputata.

18. Diaporthe densa Sacc., Ann. Mycol. XII, 1914, p. 289. -- Perithe- 5788 ciis late denseque gregariis, in cortice parum infuscato nidulantibus, cito erumpentibus et peridermiis laciniis arrectis cinctis, depresso-globulosis, 300-400 \mu diam., nigricantibus, linea stromatica mediocri; ascis tereti-clavatis, subsessilibus, apice bifoveolatis, 48-

 $50 \times 6$ , octosporis, aparaphysatis; sporidiis distichis fusoideis subrectis, utrinque obtusulis, non apiculatis diblastis v. quadriguttulatis, hyalinis,  $12\text{-}14 \times 4$ .

Hab. in ramis morientibus Aesculi Hippocastani (Hippocastanaceae), M. Weisskircken, Moravia (F. Petrak).

19. Diaporthe transiens Sacc., Ann. Mycol. XI, 1913, p. 558.— Peri 5789 theciis nunc sparsis, nunc seriatis, modo vero in caespitulos subvalseos collectis, cortice nidulantibus, globosis, nigris, 0,4 mm. diam. in ostiola cylindraceo-filiformia usque ad 1 mm. emergentia, modo solitaria modo fasciculata desinentibus; ascis tereti-fusoideis, subsessilibus, 33-36 × 7, lumine apice bifoveoleatis, octosporis; sporidiis distichis tereti-fusoideis, subrectis, 15-16 × 4-4,3, ntrinque macula mucosa pertenui initio auctis, 4-guttulatis demum tenuiter 1-septatis, non v. vix constrictis, hyalinis.

Hab. in cortice emortuo A e s c u l i H i p p o c a s t a n i (Hippocastanaceae), Weisskirchen, Moraviae (F. Petrak).— Linea stromatica nigra, perithecia plus v. minus numerosa excipiens, per corticem interiorem excurrit. A Diap. (Chorostate) aesculicola (Cooke) Berl. et Vogl. — Syll. IX p. 400 — imprimis differt sporidiis conspicue brevioribus. Ob dispositionem peritheciorum revera ambigit inter Tetrastagan et Chorostatem.

20. Diaporthe Genistae Rehm, Ann. Mycol. XI, 1913, p. 152. — Peritheciis substromatice aggregatis, ramulos denique externe denigratos ambientibus, plerumque solitariis, cortici innatis, globulosis, 0,15 mm. lat. per epidermidem papillula crassa elongata, cylindrica, 0,15 mm. longa prorumpentibus; ascis fusoideis, -50 × 5, octosporis; sporis fusoideis, rectis, medio septatis, haud constrictis, utraque cellula biguttata, hyalinis, distichis, 10-12 × 2; paraphysibus filiformibus.

Hab. ad ramulos Genistae pilosae (Leguminosae), prope Hambura, Moraviae (Petrak). — D. Vepris proxima.

21. Diaporthe ligustrina Petrak, Ann. Mycol. XIII, 1915, p. 49, et Fl. 5791 Boh. et Mor. exsic. II Ser. 1., n. 1115.— Peritheciis late dispersis, gregariis, in cortice nidulantibus eumque pustulatim elevantibus, nigris, membranaceo-coriaceis, 300-400 μ diam., globosis, demum ostiolo brevissimo erumpentibus; ascis cylindraceo-fusoideis utrinque parum attenuatis, sessilibus, 42-55 × 6-10, octosporis, aparaphysatis; sporidiis mono-vel subdistichis, 1-3-septatis, ad septum medium tantum lenissime constrictis, fusoideis, utrinque obtusulis, guttulis 2-4 includentibus, 9-13 × 3-4, hyalinis.

Hab. in ramulis siecis, corticatis Ligustri vulgaris (Oleaceae) «Svrcov» dicto prope urbem «Mähr. Weisskirchen», Moraviae orientalis.

22. Diaporthe minuta Dearness et House, N. York St. Mus. Bull. n. 188, 5792 p. 30 (1916). — Peritheciis minutis, 0,3 mm. cr., crebre sparsis, ostiolo nigro e cute lacerata parum conspicuo, carneo albo; ascis fusoideis, breviter stipitatis, 75 × 6-7, profuse paraphysatis, paraphysibus linearibus ascos superantibus; sporidiis uniseptatis, parum constrictis, hyalinis, guttulatis, utrinque acutis, 15 × 3.

Hab. ad ramos emortuos C e an o thi americani (Rhamnaceae), Albany, Amer. bor. (H. D. House).

23. Diaporthe? exiguistroma Dearn., Mycologia, 9., 1917, p. 348.— Stromatibus minutis, sparsis, cortice immutato insertis, lignum non attingentibus nec linea nigra stromatica cinetis, epidermidem circulariter disrumpentibus, circ. 0,3 mm. diam.; peritheciis 2-3 in quoque stromate, sectione albis, 100-200 μ diam., ostiolis obtusis, brevibus (vix conspicuis); ascis paucis in quoque perithecio, 75-90 × 15, paraphysatis; sporidiis subdistichis, hyalinis, 1-septato-constrictis, 4-guttulatis, rectis curvulisve, utrinque rotundatis, 18-24 × 6-7.

Hab. in ramis emortuis Rosa e sp. (Rosaceae), Vancouver Island (John Macoun). — Praesentibus paraphysibus an potius var. Metasphaeriae sepincolae?

24. Diaporthe recedens Sacc., Ann. Mycol. XII, 1914, p. 290.— Peritheciis laxe gregariis in cortice vix pustulato et colore immutato nidulantibus, globoso-conoideis, totis atris, 300-400 μ diam., ostiolo perexiguo vix conspicuo; contextu laxe celluloso fuligineo; linea stromatica obsoleta; ascis tereti-fusoideis subsessilibus apice rotundatis minuteque bifoveolatis, 60-75 × 8,5, aparaphysatis, octosporis; sporidiis distichis v. rarius oblique monostichis, fusiformibus rectis curvulisve, quadriguttatis 1-septatis, non constrictis, 12-15 × 3,5-4,5, hyalinis.

Hab. in ramis morientibus Populi nigra e (Salicaceae), M. Weisskirchen, Moravia (F. Petrak).

25. Diaporthe extranea Sacc., Ann. Mycol. XII, 1914, p. 289.— Peritheciis in cortice fere immutato nidulantibus, demum ostiolo brevissimo erumpentibus, late aequaliter gregariis, globosis, 0,4-0,5 mm. diam., linea nigra tortuosa stromatica per lignum excurrente signatis; ascis fusoideis, subsessilibus, 45-50 × 7-7,5, apice bifoveolatis, aparaphysatis, octosporis; sporidiis distichis, fusoideis, tetrablastis v. 4-guttulatis, medio non constrictis, 11-12 × 2,3-2,5, hya-

linis, interdum inaequilateris.

Hab. in ramis corticatis morientibus Salicis purpure ae (Salicaceae), M. Weisskirchen, Moravia (F. Petrak).

26. Diaporthe Veronicae Rehm in Petrak, Ann. Mycol. 14., 1916, p. 5796 165. — Peritheciis late dispersis in cortice nidulantibus, raro basi tantum vel fere omnino ligno immersis, linea atra stromatica per lignum excurrente signatis, subgregariis globosis, fusco-nigris, interdum plus minusve compressis, membranaceo-coriaceis, 350-500 μ diam., ostiolis plerumque brevibus tenuibus, saepe parum curvulis, raro plus minusve elongatis. Ascis cylindraceo-fusoideis utrinque parum attenuatis sessilibus, 42-50 × 5-10, octosporis, aparaphysatis. Sporidiis oblongo-fusoideis utrinque obtusulis rectis, raro parum curvulis, 1-2-septatis, non vel ad septum medium tantum lenissime constrictis, guttulas 2-3 includentibus, 9-14 × 4-5, hyalinis.

Hab. in ramis emortuis Veronicae speciosae (Scrophulariaceae), in hortis M. Weisskirchen, Moravia.

27. Diaporthe rhanicensis Petrak, Fl Boh. et Mor. exsice. II Ser. I, 5797 Pilze n. 1045; Ann. Mycol. XII, 1914, p. 477. - Stromatibus sparsis, in cortice nidulantibus eumque pustulatim elevantibus, demum perforantibus, basi 2-4 mm. diam.; peritheciis in cortice inferiore 12-30 irregulariter congregatis, globosis, membranaceo-coriaceis, fusco-atris 500-800 μ diam., in collum cylindraceum valde flexum attenuatis, collis convergentibus, discum atrum, laciniis epidermide vix adhaerentibus cinctum formantibus, ostiolis prominulis, plus minusve coalitis, hemiglobosis; ascis cylindraceo-clavatis, apice rotundatis, basim versus paullatim attenuatis, longiuscule stipitatis, 80-100 × 9-12, pars sporif. 55-76; sporidiis subdistichis oblongo ovatis v. oblongo ellipsoideis, utrinque rotundatis, medio uniseptatis, ad septum non v. perparum constrictis, hyalinis, 10-18 × 3-6, loculis interdum uni-v. biguttulatis; paraphysibus tenuissimis filiformibus, ascis brevioribus v. fere aequilongis.

Hab. in ramo corticato putrido Tilia e platyphylla e (Tiliaceae), prope Teplitz ad flumem Becwa prope Mähr.-Weisskirchen, Moravia orient. — Ab aliis speciebus in Tilia viventibus distincta.

MYRMAECIUM (Nits.) Sacc. — Syll. I p. 600, XIV p. 492, XVII p. 675, XX p. 389.

1. ? Myrmaecium Cannae Dearn. et Barthol., Mycologia, 1917, p. 347.— 5798 Stromatibus minutis, 0,3-1 mm. lat., sparsis, amphigenis sed sae-

pius hypophyllis, erumpentibus, nigricantibus; peritheciis 1-pluribus (usque ad 17) iu quoque stromate, nigris, globosis v. truncato-conicis, 90-180  $\mu$ , ostiolis brevibus, obtusis, nigris, nitidulis; ascis breviter stipitatis,  $60\text{-}90 \times 6\text{-}10$ , paraphysibus interdum ramosis; sporidiis hyalinis, 1-septatis,  $10\text{-}15 \times 4\text{-}8$ , cellula sup. crassiore; peritheciis nonnullis conidiis lineari oblongis, obscure 1-septatis,  $15 \times 2,5\text{-}3$ , sporophoris suffultis repertis.

Hab. in foliis emortuis C annae indicae (Cannaceae), Cabo Rojo, Porto Rico (F. L. STEVENS).

2. Myrmaecium Penicillariae Speg. in Anal. Mus. Nac. Buenos Aires 5799 XXVI p. 123 (1912) c. ic.— Stromatibus erumpentibus, lineari-subtorulosis, atris, opacis, matrice sordide cinerascente insidentibus, parvulis, 0,5-1,5 × 0,2-0,25 mm.; peritheciis subglobosis, 150-180 μ diam., carbonaceis, substantia stromatica concolori pauca connexis, ostiolo circulari non papillato perforatis, contextu indistincto; ascis subfusoideis, apice obtusis, basi cuneato-pedicellatis, 90 × 14, paraphysibus longioribus copiose obvallatis; sporidiis oblique distichis, ellipsoideo-cylindraceis, utrinque obtusis, medio septatis, non constrictis, hyalinis, eguttulatis, 12 × 4.

Hab. in culmis aridis subputrescentibus Penicillaria e typhoidis (Graminaceae), in cultis prope Daccar, Senegal.

**ENDOTHIA** Fr. — Syll. I p. 601, IX p. 700, XIV p. 550, XVII p. 675, XXII p. 390, 966.

De speciebus *Endothiae* confer absolutissimam monographiam cll. Shear et Stevens in Bull. n. 380 Un. St. Depart. of Agricult., Jan. 1917, iconibus optimis illustratam. Species sic exponuntur:

Sect. I. Sporidia breviter cylindrica v. allantoidea, continua v. pseudoseptata.

- Endothia gyrosa (Schw.) Fr., Summa V. S. p. 385 p. p., Peziza cinnabarina Schw. Syll. VIII p. 399 (sub Lachnella). Sporulae 3-4 × 1,5-2; sporophora 7-9 μ; asci 25-30 × 6-7; sporidia 7,5-10 × 2-2,5 (quercicola, Amer. bor.).
- Endothia singularis (H. et P. Sydow) Shear et Stev., l. e., Caloplactis singularis
  H. et P. Syd. 1912 (quercicola, in Colorado et New Mexico, Amer. bor.), cfr.
  inter Nectrioideas.

Sect. II. Sporidia oblongo-fusoidea v. oblongo-ellipsoidea, matura 1-septata.

Endothia fluens (Sow.) Shear et Stev., l. c. p. 16. Sphaeria fluens Sow. 1814, Endothia gyrosa (Schw.) Fuck.—Syll. I p. 601 — Sphaeria radicalis Schw. 1828, End. radicalis (Schw.) De Not., Syll. XXII p. 966.— End. virginiana P. et H. And., End. pseudoradicalis Petri — Sporulae 3,5 4 ≈ 2; sporoph. 10-24 μ; 30-40 × 6-8; sporidia 6,5-9 ≈ 3-4 (in Amentaeeis etc., Europa, Asia, America). — Var. mississippiensis Shear et Stev. (in Quercu et Castanea, Amer. bor.).

- 4. Endothia longirostris Earle Syll. XVII p. 675 Sporulae  $2 \cdot 4 \times 1 \cdot 1.5$ ; asei  $25 \cdot 35 \times 5 \cdot 7$ ; sporidia  $7 \cdot 7.5 \times 3 \cdot 3.5$  (in cortice arbor, ignotae, Porto Rico).
- 5. Endothia parasitica (Murr.) P. et H. And., cfr. Syll. XXII p. 390.— Sporulae 3,5-4,5 \(\pi\) 1,5-2. Asci 40-50 \(\pi\) 8; sporidia 8-9 \(\pi\)4-4,5 (imprimis castanicola, Amer. sept. austr.).
- 6. Endothia tropicalis Shear et Stev., l. c. p. 20, Nectria gyrosa Berk. et Br.-Syll. XVII p. 784 (sub Cryphonectria).— Sporulae 3,5-7 × 1,5-2,5; asci 40-50 × 7; sporidia 8-10 × 4-4,5 (in Endocarpo glandulifera, Ceylon).
- 1. Endothia pseudoradicalis Petri, Studi Malattia del Castagno, in Ann. 5800 R. Ist. Sup. Forest. Naz. v. II, 1917, Extr. p. 59, tab. III fig. 10, 12. Stromatibus rotundatis v. leniter elongatis pallide flavo-aurantiacis 1-1,5 mm. lat. 0,5-1 mm. alt.; pycnidiis loculis meandriformibus praeditis; sporophoris 12-16 μ long. conidiis hyalinis 3-3-8 × 2,5; peritheciis 1-raro 2-stratosis, 300-380 μ diam., parietibus leniter fuligineis plectenchimaticis, 30-36 μ cr. praeditis; collo nigro 0,2-0,7 mm. longo, ostiolo non prominenti; ascis 32-36 × 6-8; sporis ovoideis v. ellipsoideis, uniseptato-constrictulis, raro monostichis plerumque irregulariter distributis, plerumque 6,5 × 3,2, v. 6-8 × 3-3,7.

Hab. in cortice aegroto C a s t a n e a e s a t i v a e (Fagaceae), Italia Centr.

2. Endothia virginiana P. J. et H. W. Anderson, Phytopathology, II 5801 (1912) p. 261.— Stromatibus gregariis, tuberculato-pulvinatis, subsphaericis, ellipsoideis vel elongatis, erumpentibus, aurantiacis vel aurantiaco-rubris, subpulverulentis, in iuventute luteis; peritheciis in stromate profunde immersis, globulosis, 300-450  $\mu$  diam., in collum atrum praelongum productis; ostiolis nigris, punctiformibus, haud raro rostellatis; ascis subclavatis, aparaphysatis, octosporis, 32-37  $\mu$  longis; sporidiis irregulariter monostichis vel subdistichis, late fusoideis, rectis, hyalinis, 1-septatis, leniter constrictis, 6-7  $\times$  2,5-3. Pyenidiis subsuperficialibus in stromatibus ipsis vel distinctis, piriformibus; sporulis minutis, bacillaribus, 3,6  $\times$  1,6, in cirrum luteum vel aurantiacum protrusis.

Hab. in ramis dejectis et in cortice Castaneae de ntatae (Fagaceae) et Quercus velutinae (Cupuliferae), in Pennsylvania, West Virginia et Virginia, in Amer. bor.

3. Endothia radicalis (Schw.) De Not.—Syll. I p. 600 et XXII, p. 966 5802 (nota).

Hab. (adde) in cortice nondum emortuo Quercus myrsinefoliae (Cupuliferae), Kawauye prov. Mino, Japonia (K. HARA). — Ipsissima species quae occurrit in Europa et America.

Nomen *E. radicalis* spectat ad Notarisium, non ad Friesium qui in Summa Veg. Scand. H p. 385, tantum genus condidit. Asci 38  $\times$  5; sporidia 7-7,5  $\times$  4, obsolete 1-septata.

4. Endothia havanensis Bruner, Mycologia 1916, p. 241, t. CXCII.— 5803 Stromatibus innato-erumpentibus, gregariis, initio laete flavis, dein aurantiis, demum flavo-brunneis, parte interiore ad perithecia laetius coloratis, subrotundis, verruciformibus v. elongatis, 2-15 × 2-4 mm.; peritheciis nigris globosis, longicollibus, stromate immersis, 275-400 μ diam., ostiolis distructis, atris, varie elongatis, 200-1000 × 90-135; ascis subclavatis, 8 sporis, aparaphysatis, 33-41 × 5-7,5; sporidiis subdistichis fusoideis, bicellularibus, constrictulis, typice minute guttulatis, hyalinis, interdum subinaequilateris, 7,4-9,5 × 2,9-4. Sporulis ex stromatibus cavitatibus irregularibus, oblongis, 3-4,5 × 0,8-1,6, hyalinis in cirros aurantio-flavos expulsis.

Hab. in cortice emortuo Eucalypti occidentalis, E. botryoidis, E. rostratae, E. microphyllae, E. robustae (Myrtaceae), nec non Perseae gratissimae (Lauraceae), Mangiferae indicae et Spondiae Mombii (Anacardiaceae), in ins. Hayana et Cuba.

### Sect. 5. Phaeodidymae

MELANCONIELLA Sacc. — Syll. I p. 740, IX p. 753, XIV p. 560, XVI p. 509, XVII p. 691.

1. Melanconiella pallida Rehm, Ann. Mycol. X, 1912, p. 397. — Pe-5804 ritheciis stromatice c. 1 mm. diam. nigre conjunctis, 6-8 arcte congregatis, nigris, in cortice interiore monostiche nidulantibus, globosis, 0,2 mm. diam., epidermidem conice elevantibus et disculo minutissimo nigro perforantibus, ostiolis perparvulis semiglobose prominentibus; ascis cylindraceis 250-300 × 20, octosporis; sporis ellipsoideis v. subclavatis, bilocularibus interdum cellula inferiore breviore, ad septum subconstrictis, fuscis, guttulis oleosis perparvulis primitus repletis, strato mucoso tenui obdactis, 30-35 × 12-14, monostichis; paraphysibus?

Hab. in ramulis Caryae amarae (Juglandaceae), London Ontario Canada, Amer. bor. (J. Dearness). — Proxima Mel. apocryptae Ell. Huc pertinet Melanconium pallidum Peck.

VALSARIA De Not. et Ces. — Syll. I p. 741, IX p. 755, XI p. 318, XIV p. 560, XVI p. 509, XVII p. 691, XXII p. 390.

1. Valsaria colludens Rehm, Ascomyc. Philipp. V., Leaflets of Philipp. 5805
Botany, VI (1914) p. 2217. — Stromatibus gregariis, innatis, dein
prorumpentibus, corticis laciniis cinetis, orbicularibus, 2-2,5 mm.
latis; peritheciis plerumque 2-3 infra medium arcte connatis, conoideis, hemisphaerice prominentibus, distincte papillulatis, ostiolo
perspicuo pertusis, nigro-fuscis, glabris, 0,5-0,9 mm. latis, membranaceo-subcarbonaceo-contextis, fragilibus; ascis cylindraceis 130 ×
25 circ., J +, paraphysatis; sporidiis monostichis, oblongo-ellipsoideis, medio septatis, vix constrictis, obscure fuscis, 30-35 × 15-17,
strato mucoso tenui obductis.

Hab. in culmo G i g a n to c h l o a e (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

2. Valsaria insitiva Ces. et De Not. — Sacc. Syll. Fung. I p. 741. — 5806 var. Linderae Sacc., Ann. Mycol. XII, 1914, p. 298. — Ascis crassiusculis cylindricis, 95-120 \* 14-15; sporidis didynis, atrofuligineis, 14-16 \* 9-11; stromatibus parvis 1-1,5 mm. diam., disco minuto.

Hab. in ramis corticatis emortuis L i n d e r a e B e n z o i n (Lauraceae), London Ontario, Amer. bor. (J. Dearness).— Socius stat. pycnid. Diplodia insitiva Sace.— Var. Coluteae Sacc., l. c. p. 298.— Ascis angustioribus 100-120 × 11; sporidis didymis 16-18 × 8-9; stromatibus majusculis, elevatis, 1,5-2 mm. diam., disco latiusculo.

Hab. in ramis corticatis emortuis Coluteae arborescentis (Leguminosae), London Ont., Amer. bor. (J. DEARNESS).

3. Valsaria haraeana (Syd.) Syd. in Th. et Syd., Ann. Myc. 13., 1915, 5807 p. 339, Dothidea haraeana H. et P. Sydow, Ann. Mycol. XI, 1913, p. 267. — Stromatibus innato-erumpentibus, rotundatis, pulvinatis, peridermio rupto cinctis, atris, ¹/₄-³/₄ mm. diam., superficie ob loculos prominulos rugulosa; loculis 5·20 in quoque stromate; ascis cylindraceis, 70·95 ≈ 10·12, octosporis; sporidiis monostichis, ellipsoideis v. ellipsoideo-oblongis, utrinque late rotundatis, medio 1-septatis et constrictis, castaneo-brunneis, 14·17 ≈ 7·8.

Hab. in ramis siccis Les pedezae sp. (Leguminosae), Kawauyemura prov. Mino, Japoniae.

4. Valsaria Strebli Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. 5808 Bot. VI (1914) p. 2270. — Stromatibus gregariis, cortici interiori haud denigrato innatis, peridermium prorumpentibus, lenticularibus, atris, glabris, 1-1,5 mm. latis; peritheciis 3-5, globulosis, 200 μ diam., minute papillulatis, demum collabentibus, membranaceis; ascis cylindraceis, filiformi-paraphysatis, 150 × 20-25, J-; sporidiis monostichis biscoctiformibus, utrinque obtusis, medio valde constrictis, levibus, obscure fuscis, 30-33 × 15-17.

Hab. in ramo emortuo Strebli asperis (Moraceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO).

Valsaria Cinnamomi (Ces.) Sacc., Syll. I, p. 718 et Notae Myc. XXIV 5809
 p. 9 (Bull. Orto bot. Napoli).

Hab. (adde) in cortice duriore emortuo Eugeniae grandis (Myrtaceae), cultae, Singapore (Baker). — Stromata extus eximie rufa ostiolis nigricantibus punctata, coriaceo molliuscula, intus albido-cinerea et serius fusca; contextus perithecii nigrescens; asci cylindrici,  $50 \times 8$ ; sporidia oblique monosticha, ovato-ellipsoidea, 1-septata, non constricta,  $8.10 \times 4.5.5$ , laete olivaceo-brunnea. Bene congruit species cum diagnosi Cesatiana.

6. Valsaria Citri Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Bot. 5810 VI (1914) p. 2270. — Stromatibus in ligno decorticato fere sessilibus, orbicularibus vel elongatis, atris, glabris, saepe confluentibus. 1-3 mm. diam. vel longis; peritheciis 3-5 innatis, globosis, stroma verrucose elatum papillula minima superantibus, monostichis, 0.5 mm. latis; ascis cylindraccis, octosporis, 100 × 10, paraphysibus filiformibus obvallatis; sporidiis monostichis, biscoctiformibus, medio valde constrictis, fuscis, 15 × 8.

Hab. in Citro nobile (Rutaceae), emortuo, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

7. Valsaria hypoxyloides Rehm, in Theissen Ann. Mycol. X, 1912, p. 12–5811 cum icon. — Stromatibus gregariis, 0,7-1,2 mm. diam., saepius in caespitulos usque 2,5 mm. latos, 1-1,3 mm. altos connatis, ferrugineo-brunneis, vertice corroso-rugosis, ostiolis prorumpentibus nigro-papillatis, intus griseo-atris; peritheciis immersis botuliformibus, cavitate elliptica, 420-470  $\approx$  300-350, in collum 180-250  $\mu$  long. et 40-55  $\mu$  latum productis, densiuscule stipatis; ascis cylindraceis, breviter pedicellatis, p. sp. 78-90  $\approx$  8-10, octosporis; sporis monostichis, brunneis, verrucosis, ellipsoideis ad septum medium leniter constrictis, 12,5-14  $\approx$  7-8 (raro usque 17  $\mu$  long.).

Hab. in ligno denudato, Sao Leopoldo Rio Grande do Sul, Brasilia (RICK). — Vals. pseudohypoxylonis Speg. proxima a qua differt sporis verruculosis, colore stromatis etc. Vals. Cinnamomi (Ces.) Sacc. etiam affinis.

8. Valsaria discoidea Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 5812 Botany, VI (1914) p. 2216. — Stromatibus cortice intus denigrato gregarie innatis, ramulum ambientibus, plerumque seriatim prorumpentibus, lenticularibus, epidermide cinetis, fere discoideo-orbi-

eularibus, fuscidulis, primitus albido-conspersis, non carbonaceis, 1-2 mm. latis; peritheciis 10-12 monostichis, arcte congregatis, conoideis, distincte papillulatis, 150  $\mu$  circ. latis, apicem stromatis plus minusve elevantibus et prominentibus, parenchymatice fusco-contextis; ascis clavatis, 80-90  $\ast$  10, J-, paraphysibus filiformibus, 1,5  $\mu$  cr., septatis; sporidiis ellipsoideis, medio septatis vix constrictis, fuscis, 12-14  $\ast$  5, plerumque in superiore asci parte, 35-40  $\mu$  longa distichis.

Hab. in ramulis putridis deciduis, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. Reyes).

9. Valsaria consors Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 5813 of Sci. VIII (1913) p. 259. — Stromatibus ramulum ambientibus, in ligno late denigrato sub cortice nidulantibus, demum prorumpentibus, conoideis, atris, 1 mm. circ. diam.; peritheciis 8-10 monostichis, globosis, nigris, 250 μ diam., in collum longum ambientibus et in disculum hemiglobosum conjunctis, ostiolis conoideis, parvulis, prominentibus; ascis cylindraceis, octosporis, filiformi-paraphysatis, 90-100 ε 8, J-; sporidiis monostichis, oblongis, biscoctiformiter medio constrictis ibique septatis, fuscis, 12-14 ε 5-6.

Hab. in ramulo emortuo humo jacente, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). — Affinis V. Staphylinae E. et E. et V. kriegerianae Rehm,

ANISOMYCES Theiss, et H. Sydow, Ann. Mycol. XII, 1914, p. 270.— 5814
Stroma perithecigerum verruciforme, per epidermidem erumpens et
liberum, subtus non profundius folio immersum, parenchymaticum.
Perithecia stromati immersa, sphaeroidea, collo longiore periphysibus instructo superficiem attingentia. Asci paraphysati octospori.
Sporidia didyma, brunnea, cellula inferiore minuta papilloidea.— A
Valsaria, cui proxime affine, differt fabrica sporarum et stromate
subsuperficiali.— Huc pertinet secund. Theiss, et H. Sydow Dothidea papilloideo-septata P. Henn., Sacc. Syll. XVII p. 852, et tune
dicenda Anis, papilloideo-septata (P. Henn.) Theiss, et Syd. (in foliis Sapindace ae sp., in Amazonia).

#### PHAEOSPERMA (Sace.) Trav. — Syll. XXII p. 393.

Phaeosperma? Bohemeriae Speg., Mycet. Argent. VI, Anal. Mus. 5815
 Nac. Buenos Aires XXIII p. 55 (1912). — Peritheciis matrice fere immutata plus minusve insculptis, quandoque totis immersis, laxe gregariis, primo tectis dein, cortice secesso, plus minusve nudatis,

lenticularibus, parvis, 150-200  $\mu$  diam., membranaceis, atris, glabris, papillato-ostiolatis, contextu dense minuteque parenchymatico, olivaceo; ascis clavatis breviter crasseque pedicellatis, 150  $\approx$  20, paraphysibus filiformibus densissime obvallatis, octosporis; sporidiis distichis, ellipsoideo-biconicis, utrinque acutiuscule rotundatis, 35-40  $\approx$  15-18, medio septatis, ad septum constrictulis, levibus, subopace fuligineis, primo grosse 2-guttatis dein eguttulatis.

Hab, in ramis avidis putrescentibus Bohemeriae candidissimae (Urticaceae), in cultis prope La Plata, Argentina.

- PSEUDOTHIS Theiss, et Syd., Ann. Mycol. 12., 1914, p. 274. Theissen, Ann. Mycol. 16., 1918, p. 179, cum icon. Gen. Valsariae affinis, sed differt stromatibus foliicolis fere superficialibus, clypeo epidermali nigro nitido tectis, demum prominenti. Stroma rubrobrunneum verruciforme. Perithecia stromati omnino immersa, globulosa, collo brevi periphysibus instructo praedita. Asci paraphysati cylindraceo-clavati octospori. Sporidia phaeodidyma. A gen. Anysomyces clypeo diversum. Typ. gen. Ps. Machaerii (Rehm) Th. et Syd., Dothidella M. Henn., Syll. XIV p. 676.
- 1. Pseudothis Caseariae Theissen, Ann. Mycol. 16., 1918, p. 182, fig. 5816 4³. Plerumque 0,5-1 mm. lata, raro usque 1,5 mm. elongata; peritheciis e depresse globosis usque globosis, in ligno usque 1 mm. alt., collo 300-350 μ longo; sporidiis 12-14 × 5-6; stromate supra vinoso, loculis e rotundato-ellipsoideis ellipsoideis praedito; conidiis e globosis ellipsoideis, 6-8 × 6, pallide brunneis.

Hab. in foliis, petiolis ramulisque Caseariae sp. (Flacourtiaceae), Rio Grande do Sul, Brasilia.

2. Pseudothis Pterocarpi (Syd.) Sydow, in Th. et Syd., Ann. Mycol. 13., 5817 1915, p. 339, Dothidea Pterocarpi Syd., Enum. Philipp. Fungi I, in Philipp. Journ. of Sci. VIII (1913) p. 280.— Stromatibus epiphyllis, superficialibus, sparsis vel paucis aggregatis, rotundatis, hemisphaerico-pulvinatis, atris, opacis, 0,33-1 mm. diam., rugulosis; loculis paucis, 1-5, in quoque stromate, majusculis; ascis cylindraceo-clavatis, apice obtusis, 48-60 × 10-16, octosporis; sporidiis distichis, ovato-oblongis vel oblongis, valde inaequaliter 1-septatis, fusco-brunneis, 10-13 × 5-7, loculo basali 3-4 μ tantum longo.

Hab. in foliis languidis Pterocarpi in dici (Leguminosae), Cebu, ins. Philipp.

Pseudothis Bauhiniae Theissen, nom. nov., Ann. Mycol. 16., 1918, 5818
 p. 183. — Sporidiis 10-11 \* 4-5,5, loculis inaequalibus praeditis.

Hab. in Bauhinia Vahlii (Leguminosae), Calcutta, Indiae. — Syn. Roussoella Bauhiniae v. Höhn. (Fragm. n. 774) sed fungus immaturus, non Rouss. Bauhiniae (Wint. in Trabutia) v. Höhn, sec. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 187.

- 4. Pseudothis congensis Theissen nom. n., Ann. Mycol. 16., 1918, p. 184.— 5819
  Ita vocanda est Homostegia Pterocarpi Pat. et Har. nec Pseudothis Pterocarpi (Syd. in Dothidea) Syd. et Th., enfr. supra.
- 5. Pseudothis cingulata Sydow, Engler Botan. Jahrbüch., 54., 1916, 5820 p. 257. Stromatibus amphigenis, maculis orbicularibus flavidis vel flavo-brunneolis 1-1,5 cm. diam. insidentibus, plus minus dense aggregatis, basi sub epidermide immersis, dein erumpenti-subsuperficialibus, verruciformibus, atris, 250-400 μ latis, usque 300 μ altis, ex cellulis rufo-brunneis parenchymatice contextis; peritheciis singulis vel paucis in quoque stromate, globulosis, superne in collum stromatis superficiem fere attingens crassiusculum periphysatum abeuntibus; ascis mox evanidis, paraphysatis; sporidiis oblique monostichis usque distichis, oblongis, rufo-brunneis, totis 10-12 × 4-4.5, loculo supero multo majore et saepissime zonula subhyalina cinctis, infero 3 μ tantum longo et lato; conidiis simul praesentibus varie globulosis, continuis, brunneis, 7-10 diam.

Hab. in foliis vivis Leguminosae enjusdam, ad flum. Leonh. Schultze, Nova Guinea nord-or., Africae (LEDERMANN).

#### Sect. 6. Hyalophragmiae

HOLSTIELLA P. Henn. — Syll. XIV p. 593, XXII p. 395.

1. Holstiella Eutypa Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 5821 Botany, VI (1914) p. 2217. — Stromatibus gregariis, sub cortice innatis, eo demum delapso in ligno fuscato denudatoque sessilibus, corticis reliquiis obtectis, irregulariter orbiculari-convexis, 2-3 mm. diam., 1 mm. usque altis, fusco-nigris, eutypoideis, intus nigris; peritheciis 5-8 stromate innatis, globulosis, 150 μ circ. diam., monostichis, ostiolis conoideis vix conspicuis praeditis; ascis clavatis, apice rotundatis, J-, 150 × 20, filiformi-paraphysatis; sporidiis distichis, fusiformibus, rectis, primitus medio tantum septatis dein 3-septatis, non constrictis, hyalinis, 45-50 × 10-12, strato mucoso tenui obductis.

Hab. in ramo arboris delapso, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

- CALOSPORA Sacc. Syll. II p. 231, IX p. 871, XI p. 341, XIV p. 593, XVII p. 717, XXII p. 395.
- 1. Calospora succica Rehm in Vleugel, Svensk Bot. Tid. 1911, V, p. 5822 327. Peritheciis sub epidermide dilute cinerescente et haudelevata acervulatim monostiche 15-20 arcte congregatis, glabris, globulosis, 150 μ diam., collis tenuissimis convergentibus et in papil. lam perparvam nigram vix prominentem coacervatis; ascis clavatis, 50-60 × 8-9, octosporis; sporidiis oblongo-cylindraceis, utrinque obtusis valde curvatis, 3-septatis, hyalinis, 12-14 × 2-2,5, in superiore asci parte congestis; paraphysibus praelongis, filiformibus, 2,5 μ cr.

Hab. in ramis emortuis Salicis nigricantis (Salicaceae), Umea, Suecia. — Affinis videtur Calosporae (Calosphaeria) taediosae. Pycnidia nulla observata.

- PHAEODIAPORTHE F. Petrak, Ann. Mycol. 17., 1919, p. 99. Est Diaporthe sporidiis brunneis donata.
- 1. Phaeodiaporthe Keissleri F. Petrak, l. c.— Stromatibus tunc sparsis 5823 tunc subgregariis peridermio immersis, valsaceis e basi subrotundata subconoideis, basi 1-2 mm. circ. latis; peritheciis uniseriatis, irregulariter distributis, 450-600 μ circ. cr.; ostiolo cylindraceo prominenti; ascis anguste elongato-clavatis, apice late rotundatis, octosporis, sessilibus, 165-190 × 24-30; sporis subdistichis, elongato-ellipsoideis v. elongato-ovoideis, utrinque angustatis et apice obtusatis, medio uni-septato-constrictulis utrinque apiculo 3-5 μ longo 4,5-6 μ lato praeditis, obscure viridi-olivaceis, 25-38 × 12-16; paraphysibus nullis.

Hab. in ramis siccis? Aesculi Hippocastani (Hippocastanaceae), in horto Mil. Oberrealschule Mähr. Weisskirchen, Austria (F. Petrak).

#### Sect. 7. Phaeophragmiae

- THYRIDARIA Sacc. Syll. II p. 140, IX p. 821, XI p. 331, XIV p. 578, XVII p. 741, XXII p. 398.
- 1. Thyridaria californica Rehm, Ann. Mycol. IX, 1911, p. 365. Pe-5824 rithecia in cortice late dealbata, intus late denigrata, demum elevata late gregarie innata, primitus dispersa, dein pluria arcte connata, globoso-conoidea, papillula obtusa minima prorumpente, 0,5 mm. diam., haud carbonacea, parenchymatice fusce contexta glabra; asci cylindracei, octospori, 70-80 × 7-9, J ope —; sporae oblongae,

utrinque rotundatae, rectae, 3 septatae, ad septa vix constrictae, subfuscae, 12\*4, monostichae; paraphyses filiformes, septatae,  $2~\mu$  cr.

Hab. ad ramulos Umbellulariae californicae (Lauraceae), Montes circa Claremont, Los Angeles S. California, U. S. America (Baker et Metz). — Proxima Thyr. rigniacensis Sacc. et Flag., ascis clavatis, longe stipitatis sporisque diversa.

2. Thyridaria minor Sace., Mycol. XII, 1914, p. 228.— Sace., Syll. Fung. 5825 II, p. 140 (ut var. Thyrid. incrustantis). — Stromatibus gregariis subcutaneo-erumpentibus, verruciformibus, suborbicularibus, 1-1,3 mm. diam., nigris fulvo-purpuraceis; peritheciis 5-8 in quoque stromate, globosis, nigris, ostiolis brevibus papillatis; ascis cylindraceis filiformi-paraphysatis 110-140 × 7, octosporis; sporidiis teretioblongis, utrinque rotundatis, 16-19 × 4,5, guttulatis, brunneis, 3-septatis, constrictulis.

Hab. in ramis corticatis emortuis Colute a e arborescentis (Leguminosae), London Ont., Amer. bor. (J. Dearness). — A Thyridaria incrustante notis datis satis distinguitur.

3. Thyridaria eminens Rehm, Ascom. Philipp. VIII, in Leaflt. of Philipp. Bot. VIII, 1916, p. 2957. — Perithecia sub cortice in ligno late atrato nidulantia valsiformiter 5-10 conjuncta, orbiculariter stromatice circiter 3 mm. lata in basi denigrata collecta, per corticem prorumpentia, minutissime papillulata, poro pertusa, nigrofusca membranacea, nigro-coerulea e cellulis circiter 15 μ latis contexta, glabra, demum verrucosula primitus 0,5 mm. lata dein-1,25 mm. longa, -1 mm. lata, ascis elongato-ovoideis -120 × 30, 8-sporis; sporae oblongae, utrinque obtusae, 1-3 septatae non constrictae, flavidulae, 30 × 12, distichae. Paraphyses filiformes.

Hab. in Streblo aspero emortuo (Moraceae), Los Baños, Ins. Philipp. (M. B. RAIMUNDO).

4. Thyridaria calamincola Rehm, Ascom. Philipp. VIII, in Leaflets of 5827 Philipp. Bot. VIII, 1916, p. 2957. — Perithecia innata cortice demum delapso superficialia, valsiformiter 6-8 monostiche circa spermogonium in areola nigra, 3-3,5 mm. lata arcte congregata, conoidea, minutissime papillulata 1 mm. alta, -1 mm. lata, nigra, primitus corticis adhaerentibus obtecta, carbonacea; asci fusiformes, perlongi, 4-8 spori; sporae elongato-fusiformes utrinque acutatae, rectae, 1-dein 5-7 septatae non constrictae fuscae, 80 × 10-14, paraphyses?

Hab. in Calamo emortuo (Palmae), Mt. Maquiling, Ins. Phi-

lipp. (C. F. BAKER). - Thyr. Crocosareae (B. et B.) Cke proxima.

5. Thyridaria aurata Rehm, Ascom. exsicc. fasc. 54 n. 2101, Ann. My- 582 col. XII, 1914, p. 172. — Peritheciis sub peridermio in ligno denigrato stromatice conjunctis nidulantibus, 10-12 arete orbiculariter 1-2 mm. late acervulatis, per epidermidem laciniatam prorumpentibus, atris, subglobosis, dein piriformibus, pruina aureo-fulva obtectis, minute papillulatis, 0,3-0,8 mm. latis et altis, subcarbonaceis, non pilosis; ascis clavatis, -150 × 12, octosporis; sporis fusoideis, subacutatis, rectis v. curvatulis, medio septatis, vix constrictis, utrinque cellula 2-magniguttata dein 3-septata, hyalinis, distichis, 25 × 5-6; paraphysibus filiformibus 2 μ cr., hyalinis.

Hab. ad ramos putridos Crataegi (Rosaceae), London Ont. Canada, Amer. bor. (Dearness). — Th. Sabillei et Th. pulreraceae diversa. Verisimiliter eadem est ac infra n. 7, ubi vero diversa, quod nescimus, nomen mutandum.

 Thyridaria tarda Bancroft, Departm. of Agric. Feder. Malay Staates 5829
 Bull. 1911 n. 9. — Teste Cl. E. J. Butler has pertinet Botryodiplodia Theobromae Pat., Syll. XXII p. 1011.

Hab. parasitica in cortice ramulorum Theobromae, Albizziae, Theae, Sacchari, etc., in tropicis.

7. Thyridaria aurata Rehm, Ann. Mycol. X, 1912, p. 392. — Perithetics plus minusve -10 arcte congregatis, rarius dispersis v. solitariis sub cortice in ligno superficialiter denigrato nidulantibus, dein prorumpentibus, subglobosis v. piriformibus, minute papillulatis, 0,3-1 mm. diam., atris, pruina aureofulva obductis, subcarbonaceis, fusce nigre contextis, senilibus nigris, haud pilosis; ascis clavatis, c. 150 × 15, octosporis; sporis fusiformibus, utrinque acutatis, rectis v. subcurvatulis, primitus 1- dein 3-5-septatis, cellulis, excl. apicalibus, 1-magniguttatis, ad septa subconstrictis, hyalinis demum fuscidulis, 25-30 × 6-8, distichis; paraph. filiformibus, hyalinis, 2 μ cr.

Hab. ad lignum mucidum, Ybbsitz, Austriae inf. (P. LAMBERT).—Ob sporas magnas distincta species. Affinis etiam Thyrid. Sabillei Sacc. et Flag. Vide supra n. 5.

**KALMUSIA** Niessl. — Syll. II p. 142, IX p. 822, XI p. 331, XIV p. 578, XVII p. 742, XXII p. 398.

1. Kalmusia epimelaena Sacc., Ann. Mycol. XII, 1914, p. 290. — Pe- 5831 ritheciis ligno superficie late denigrato immersis, globulosis, gregariis, 0,5-0,7 mm. diam. nigris, ostiolo vix emergente obtuse papillato; ascis cylindraceis apice rotundatis, sensim breviter stipitatis.

 $140 \cdot 150 \approx 9 \cdot 10$ , p. spor.  $110 \cdot 120 \mu$  longa, paraphysibus copiosis filiformibus subcoalescentibus obvallatis, 4-6-sporis, lumine apice 1-foveolato; sporidiis monostichis oblongo-fusoideis,  $25 \cdot 28 \approx 7 \cdot 8$ , utrinque obtuse tenuatis, subrectis, 3-septatis, ad septum medium lenissime constrictis, fuligineis.

Hab. in ligno emortuo indurato Robiniae Pseudacaciae (Leguminosae), M. Weisskirchen, Moravia (F. Petrak). — Pulcra et distincta species.

2. Kalmusia Philippinarum Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2218. — Peritheciis sparsis, ligno late superficialiter denigrato ceterum immutato innatis, cortice tectis, conoideis, fusco-nigris, 0,5-0,7 mm. diam., ostiolo conoideo, poro lato pertuso, corticem perforante et subprominente, membranacco-coriaceo-contextis; ascis cylindraceis, 150 μ usque longis, 15 μ latis, J-, filiformi-paraphysatis; sporidiis monostichis, ellipsoideis, medio septatis, non constrictis, utraque cellula biguttata, demum 4-cellularibus, cinereo-flavidulis, 25 × 9-10.

Hab. in ramulo putrido, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. Reyes).

### Sect. 8. Phaeodictyae

**THYRIDIUM** Sacc. — Syll. II p. 323, IX p. 920, XI p. 348, XIV p. 609, XVI p. 553, XVII p. 767, XXII p. 401.

1. Thyridium flavum Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 5833 P. III, 1917, p. 226. — Stromatibus flavis, 0,5 mm. crass., multis mm. long. et alt., cortice immersis, hyphis flavis et cellulis corticis compositis; peritheciis subremotis, globosis, 0,3 mm. diam., sicco facile separabilibus, pariete tenui membranaceo, brunneo. sicco collapso, ostiolis conicis, immersis, non convergentibus; ascis cylindraceis, octosporis, parte sporifera 80 × 10; paraphysibus numerosis; sporis oblongo-ovoideis, episporio crasso, muriformibus, transverse triseptatis, longitudinaliter uniseptatis, nigro-fuligineis, septis nigris, vel fere opacis, 16-20 × 8-10; pycnidiis superficialibus, gregariis, basi confluentibus, subglobosis vel ovalibus, nigris, pariete crasso, interne flavis; sporis bacillaribus, hyalinis, 3-4 × 1.

Hab. in ramis emortuis Heveae brasiliensis (Euphorbiaceae), Peradeniya, Ceylon.

2. Thyridium Ceanothi Dearn. et House, N. Y. St. Mus. Bull. n. 179 5834 (1915) p. 31. — Peritheciis carbonaceis dense et aequaliter sparsis,

globosis, 160-300 µ diam., epidermidem subelevantibus, clypeo stromatico atro tectis, ostiolis brevibus punctiformibus; ascis paraphysatis, clavatis, stipitatis, usque ad 300 µ longis, parte spor. 75-90 ≥ 6-12; sporidiis subdistichis, superne late rotundatis, inferne subacutis, fumoso-brunneis, 3-septatis, interdum etiam septis longitudinalibus praeditis,  $15.20 \times 5.6$ .

Hab, in ramis emortuis Ceanothi americani (Rhamuaceae), N. Y., Amer. bor. - Non v. vix diversum a praecedenti.

3. Thyridium tuberculatum Rehm. Ann. Mycol. IX, 1911, p. 365. - 5835 Stroma per corticem intus nigratum extensum tubercula convexa nigra, peridermium elatum disrumpentia, c. 1 mm. diam. formans; perithecia 2-4 arcte congregata, globulosa, 0,3-0,4 mm. diam., excipulo fusco, intus hyalino erasso cineta, monostiche posita, collis in tuberculum abientibus ibique poro minutissimo vix conspicuis; asci cylindracci, c. 130 v 12, octospori; sporae oblongae v. oblongoellipsoideae, utrinque plus minusve obtusae 3-septatae, medio valde constrictae, cellulis mediis semel longitudinaliter divisis, 15-20 × 7-8, flavo-fuscis, monostichis; paraphyses filiformes.

Hab. ad ramulos Ce a not hi (Rhamnaceae), Montes circa Claremont, Los Angeles, S. California U. S. America (BAKER). - Thyrid. personatum (Cooke et Harkn.) Berl. forma tuberculorum imprimis divergit; quoad tubercula Thyridium contiguum (E. et E.) Berl. approximans.

4. Thyridium andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 5836 nos Aires XXIII p. 70 (1912). — Peritheciis hine inde laxe gregariis, ligno extus nigrificato intusque immutato omnino immersis, globosis, 250-350 \( \mu\) diam., atris, coriaceo-carbonaceis, ostiolo brevissimo non vel vix exserto praeditis, contextu indistincto; ascis cylindraceis, breviter crasseque pedicellatis, dense paraphysatis, 100-120 \* 16-18; sporidiis saepins oblique monostichis, ellipsoideis, utrinque rotundatis, typice 3-rarius 5-7-septatis, medio tantum constrictis, septo longitudinali solitario, saepe interrupto vel omnino carente, olivaceis, 20 > 8.

Hab. in ramis crassioribus aridis Lycii chilensis (Solanaceae), in dumetis circa Potrerillos prope Mendoza, Argentina.

5. Thyridium Bohemeriae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5837 Buenos Aires XXIII p. 70 (1912).—Peritheciis ligno denudato infuscatoque omnino infossis, hinc inde laxe gregariis, globosis, 150-·180 µ diam., membranaceo coriacellis, ostiolo carbonaceo superficiem attingente et leniter nigro-areolato, contextu fuligineo indi-

stincto; ascis subcylindraceis, breviter pedicellatis, 55-60  $\approx$  7-8, paraphysibus filiformibus parum longioribus densiuscule obvallatis; sporidiis oblique monostichis, fusoideis, rectis vel leniter inaequilateris, transverse 3 septato constrictis, ad septum medium validius constrictis, loculo centrali supero leniter turgidiore et quandoque septo longitudinali diviso, pallide fuligineis,  $14 \approx 3-4$ .

Hab. in ramis majoribus emortuis subputrescentibus Bohem eriae candidissimae (Urticaceae), in cultis La Plata, Argentina.

FENESTELLA Tul. — Syll. II p. 325, 1X p. 922, XI p. 349, XIV p. 610, XVI p. 553, XVII, p. 766, XXII p. 403.

1. Fenestella Ephedrae Rehm, Ann. Mycol. XI, 1913, p. 401. — Pe 5838 rithecia gregaria, 5-7 conjuncta, cortici intus late fuscato innata, globulosa, 0,5-0,8 mm. diam., papillula conoidea in rimis longitudinalibus corticis prominentia, atra, glabra, demum cortice delapso denudata, c. 1 mm. diam., scabra, parenchymatice, non carbonacee contexta. Asci cylindracei, crasse tunicati, apice rotundati, c. 200 × ·25, 8 ·spori. Sporae oblongae, utrinque rotundatae, rectae, medio vix constrictae, transverse 7-, longitudinaliter 2-septatae, obscure fuscae, 30-35 × 9-15, 1-stichae. Paraphyses filiformes, septatae, 2 μ cr.

Hab. ad radicem Ephedrae procerae F. et Mey. (Gnetaceae), Tiflis (Caucasus), hortus botan. (Nowodowski).—Vix Pleospora Ephedrae H. Fabr. (Syll. II p. 256), quae videtur diversa a Pl. Ephedrae Speg. (Syll. XVII p. 753) Pl. platensis vocanda.

2. Fenestella canadica Rehm, Ascom. Exsice. fasc. 55 n. 2112, Ann. 5839 Mycol. XII, 1914, p. 172.— Peritheciis cortici innatis, in acervulos 2-3 mm. latos 10-12 monostiche, arcte collectis, 1 mm. latis, pyriformibus, collo flavidulo stromatice obtectis, ostiolis brevibus in disculo albidulo collectis, per corticem conice elatum prorumpentibus; ascis cylindraceis, -200 × 15, 6-8-sporis; sporis oblongis, utrinque rotundatis, transverse 5-7, longitudinaliter 2-septatis, non constrictis, fuscis, 20-24 × 10-12, monostichis, paraphysibus filiformibus, 3 μ cr.

Hab. in ramis Coluteae arborescentis (Leguminosae), London Ont. Canada, Amer. bor. (Dearness). — Pl. herb. (Pers.) Rabh. var. coluteicola P. Henn. cum hac specie minime concordat.

#### Sect. 9. Scolecosporae

CRYPTOS PORA Ted. — Syll. II p. 361, IX p. 339, XI p. 353, XVII, p. 766, XXII p. 404.

1. Cry pto spora almicola v. Höhn., Fragm. z. Mykol. S46, in Stzgsb. 5840 Akad. Wiss. Wien CXXIII, 1, p. 107 (1914).—Pseudostromatibus sparsis, sa epe seriatis, conoideis, 1 mm. latis, 0,5 mm. altis, in cortice exteriore niclulantibus; peritheciis 5.8 valsoideo-conjunctis, 250-300 μ latis, coll is 250 μ usque longis, in disco atrato erumpente confluentibus, substantia stromatis a matrice hand distincta; ascis copiosis, clavato-cy lindraceis, breviter pedicellatis, apice truncatulis, octosporis, 100-110 × 8, copiose gelatinoso-paraphysatis; sporidiis fili fornibus, utrinque obtuso-attenuatis, in asco contortis, liberis area ato-in curvis, 5-10-locularibus, hyalinis, 75-80 × 2,5.

Hab. in ramulis siccis Alni viridis (Betulaceae), Schneeberg, Austria infer.

2. Cryptospora Bambusae Speg. — Syll. IX 940. — var. bakeriana Rehm, 5841 A scomy c. Philipp. I, in Philipp. Journ. of Sci. VIII (1913) p. 187. — Peritheciis 100-120 μ diam.; ascis fusiformibus 80 × 12-14; sporidi is 65-70 × 4-4,5, superne obtusis, inferne acutiusculis, 4 (? demum 8-) locularibus; paraphysibus nullis.

Hab. in fragmentis Bambusae blumeanae (Graminaceae), emortuae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

SILLIA Karst. - Syll. II p. \$61, XXII p. 405.

1. Silla bellina Bub. et Vleug., Svensk Bot. Tid. 1911, V, p. 334 5842 fg. 3. — Stromatibus valseis, acute limitatis, copiosis, pulvinato-comoideis, 1-3 mm. lat. intus extusque brunneis, ambitu circularibus v. elli pti cis, er um pentibus; peritheciis immersis, in quoque stromate nu merosis, monostichis, globosis v. ovato-polyedricis, contextu parench ymatico, laxiu scule celluloso, atro-brunneo; ostiolis longicollis, le viter emergentibus et confertis, nitidulis; ascis anguste cylindricis, aparaphysatis, 200-500 × 4-6, apice parum tenuatis intusque lumin e august ato praeditis, 8-sporis; sporidis filiformibus, fasciculatis, plus v. minus curvis, obsolete septatis, 160 × 1-2, hyalinis.

Hab. inramis Be tulae odoratae (Betulaceae), Umea, Sueciae—Ab affini Sillia ferruginea differt imprimis stromate non ferrugineo, ascis sporidiisque filiformibus etc.

# Fam. 6. Sphaeriaceae Fr.

#### Sect. 1. Allantosporae

MASSALONGIELLA Speg. - Syll. I p. 89, IX p. 442, XIV p. 478.

1. Massalongiella Imperatae Rehm, Ascom. Philippin. VIII, in Leaflt. 5843 of Philipp. Bot. VIII, 1916, p. 2956. — Perithecia striaeformiter -10 seriata, globulosa, membranacea nigra glabra, 0,15 mm. lata, cortici innata, eumque acervulatim longitudinaliter elevantia, longitudinaliter perrumpentia, ab marginibus corticis arcte adhaerentibus obtecta, modo papillulis peritheciorum nigris minutissimis longitudinaliter denudatis, in toto 2-2,5 mm. longis 1 mm. latis acervuli; ascis ovoideis -35 μ, 8-sporis; sporae oblongae obtusae, subcurvatae, hyalinae, 1-cellulares, 25 × 6-7. Paraphyses?

Hab. ad 1 m p e r a t a m e y l i n d r i e a m (Graminaceae), Los Baños, Ins. Philipp. (S. A. REYES).— Mass. Smilacis (Karst. et Har.) Berl. valde similis imprimis sporarum magnitudine plane aliena.

COELOSPHAERIA Sacc. — Syll. I p. 91, IX p. 442, XI p. 272, XVII p. 560.

1. Coelosphaeria andina Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5844 Buenos Aires, XXIII p. 47 (1912).— Peritheciis ligno denudato insidentibus, laxe gregariis, udis globosis, siccis cupulato-collapsis, 150-200 μ diam., ostiolo minuto papillato deciduo praeditis, subcarbonaceis, glabris, contextu indistincto; ascis subcylindraceis, sursum attenuato-rotundatis, deorsum in pedicellum brevem productis, 75-80 × 8, octosporis, paraphysibus filiformibus, copiosis, parum longioribus obvallatis; sporidiis recte vel oblique distichis, ex allantoideo subnavicularibus, leniter arcuatis, utrinque subacutiuscule rotundatis, eguttulatis; hyalinis, 15-20 × 3.

Hab. in ramis dejectis putrescentibus Duvanae dependentis (Anacardiaceae), in montanis Potrerillos prope Mendoza, Argentina.

NITSCHKEA Otth. - Syll. XI p. 172, XVI p. 417, XVII p. 561, XXII p. 68.

1. Nitschkea Bambusarum Rehm, Ascom. Philipp. VIII, in Leaflt. of 5845 Philipp. Bot. VIII, 1916, p. 2956. — Perithecia sub epidermide in

plagulis irregularibus circiter 1 cm. latis arcte non valsiformiter aggregata stromate tenuissimo nigritulo suffulta, dein peridermio laciniatim disrupto et ablato denudata, globulosa haud papillulata, poro vix conspicuo pertusa, nigrofusca, 0,12 mm. lata, glabra; ascis cuneato-clavatis, latis, basi sessilibus,  $20.25 \approx 7$ , 8-sporis; sporae allantoideae  $6.7 \approx 2$ , hyalinae, distichae, paraphyses nullae.

Hab. ad emortuam Bambusam vulgarem (Graminaceae), Los Baños, Ins. Philipp. (S. A. Reyes).— Nitsch. recedens (Niessl.) Berl. comparanda sed multis notis aliena.

2. Nitschkea winteriana Sacc., Notae Myc. XXII (Acc. Pad. 1917) p. 5846 159. — N. tristis (Pers.) Wint., Pilze II p. 312, saltem ex p., non Auct. — Peritheciis late et dense confertis, aterrimis, levissime asperulis, globoso-depressis, et mox collabescendo scutellatis, 600-700 μ diam., pilis mycelicis filiformibus tortuosis, atro-fuligineis, simplicibus v. raro ramosis, 9-10 μ cr., atro-fuligineis, impellucidis, obsolete septatis, cinctis; contextu celluloso, pachydermico, pluristratoso, atro; ascis fusoideis, in pedicellum brevissimum tenuatis, 24-28 × 7-7,5, rarius 23 × 8, octosporis, obsolete paraphysatis; sporidiis distichis tereti-fusoideis, subrectis utrinque obtusulis, 7,5-8,5 × 2,2-2,4, hyalinis, initio strato tenui, mucoso, hyalino, mox evanido obvolutis, 4-guttatis, denique diblastis et simulate 1-septatis.

Hab. in ramis corticatis putrescentibus Salicis (Salicaceae), Rigny, Gallia (FLAGEOLET). — A N. tristi Auct. et Sylloges, mox dignoscitar imprimis sporidiis fere dimidio brevioribus.

- Observ. Data occasione et praecunte cl. Ab. Flageolet corrigi debet Nitschkeam flageoletianam Sacc. (Syll. XVII p. 561) nil esse nisi Microthyrium epimycetem S. B. et R. (Syll. IX p. 1060) in statu contracto observatum.
- ROSTRONITSCHKEA H. M. Fitzpatriek, Mycologia, 11., 1919, p. 163. corr. Rostronischkia. (Etym. rostrum et Nitschkea cui affinis). Stromata late innato-erumpentia primum conidiophora coremioidea dein perithecia efformantia e hyalina flavescentia, conidia ovoidea unicellularia; perithecia e coriacea carbonacea prominenter rugosulo-sulcata, non collabescentia, in rostellum obtusum 4-sulcatum producta; asci clavati, 8-spori, aparaphysati; sporidia allantoidea flavescentia unilocularia. Est Nitschkea rostellata.
- 1. Rostronitschkea nervincola H. M. Fitzpatrick I. c., p. 166, tab. 11 5847 (corr. Eutypanitschkea nerv.). Nitschkia nervicola Rehm in litt. Stromatibus nigris nervisequiis hypophyllis, pulvinato-elongatis,

 $0.3\cdot0.5 \times 2\cdot10$  mm., maculis definitis contrappositis primum subroseis demum brunneis; conidiophoris usque 400  $\mu$  altis 275-600  $\mu$  diam., irregulariter sparsis v. in 1-2 seriebus dispositis, brunneo flavescentibus, ovatis uno apice subacuminatis, unilocularibus, 5-6  $\approx$  1,5; peritheciis globosis 1 mm. diam. in stromatibus insidentibus rostello obtuso, 4-sulcato, usque 1 mm. longo apice ostiolato praeditis, parietibus pallide nigris coriaceis arescendo carbonaceis non collabescentibus prominenter rugosis v. sulcatis; ascis clavatis 8-sporis  $18\cdot26\approx5\cdot6$ ; sporidiis allantoideis, unilocularibus primum hyalinis dein flavidis, irregulariter distichis,  $6.7\cdot8.4\approx1.7\cdot2$ ; paraphysibus nullis.

Hab. in foliis Gesneriae albiflorae (Gesneriaceae), in Porto Rico et Jamaica pluribus locis, America bor.

FRACCHIAEA Sace. — Syll. I p. 93, IX p. 445, XI p. 272, XVI p. 418, XXII p. 69.

1. Fracchiaea depressa Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 5848 P. III, 1917, p. 221. — Peritheciis sparsis vel congregatis, immersis dein subliberis, subglobosis, depressis, sicco collapsis, ad 0,8 mm. diam.; nigris, minute rugosis, basi hyphis brunneis cinctis, ostiolo inconspicuo, pariete crasso; ascis clavatis, stipite tenui, sursum valde inflatis, multisporis, 70-90 \* 10; sporis hyalinis, cylindraceis, obtusis, curvatis, 8-12 \* 2.

Hab. in ramis emortuis Heveae brasiliensis (Euphorbiaceae), Hapugastenne, Ceylon, Asia.

- NEOTROTTERIA Sace., Notae Myc. XXIV p. 7 (Bull. Ort. bot. Napoli 1918) (Etym. a cl. Al. Trotter).— Perithecia superficialia caespitulosa v. subsparsa atra, setosa, sphaeroidea, firme membranacea, subastoma, in subiculo repenti dendritico-ramoso, ramis divarieatis acutis inserta. Asci clavati, breviter tenuato-stipitati, aparaphysati, polyspori. Sporidia allantoidea, curvata, hyalina. Affinis videtur Fracchiacae et Coronophorae sed peritheciis eximie setosis et subiculatis rite distincta.
- 1. Neotrotteria pulchella Sacc., l. c. Peritheciis in soros hinc inde 5849 aggregatis v. subsparsis aterrimis 320-350 μ diam., globosis, vertice obtusis, setulis rigidis, cuspidatis, simplicibus, 120 ≈ 8-9, subcontinuis, radiantibus, atris, apice pallidioribus dense vestitis; contextu irregulariter parenchymatico, fuligineo; subiculo adpresso dendritico-ramoso, septato, fuligineo 6-7 μ cr. ramulis divaricatis acutis

apice binis ternis; ascis fasciculatis aparaphysatis clavatis  $40-42 \approx 7-8$ ; sporidiis copiosis, conglobatis, allantoideis, hyalinis, continuis, obsolete 3-guttulatis, curvulis.

Hab. in ramis corticatis emortuis, putrescentibus Heveae brasiliensis (Euphorbiaceae), cultae, Singapore, Asia (BAKER).

#### Sect. 2. Hyalosporae

ASCOSPORA Fr. - Syll. XXII p. 71.

1. Ascospora Vanillae Rehm, Ascom. Philipp. VIII, in Leaft. of Phi-5850 lipp. Bot. VIII, 1916, p. 2935. — Perithecia per totum epi-et hypophyllum immutatum late gregaria, epidermidi innata, globulosa glabra non papillulata nec perspique poro pertusa, circiter 100 μ lata parenchymatice fusce contexta; ascis clavatis 80 × 12, 8-sporis; sporis oblongis v. subglobosis, granulosis, oleosis repletis hyalinis 1-cellularibus, 10-12 × 5-7, distichis; paraphysibus nullis.

Hab. ad folium V an illa e (Orchidaceae), Los Baños, Ins. Philipp. (C. F. Baker). — Physalospora Vanillae A. Zimm. et Laestadia Tracersi Ces., minime congruunt, Ascospora Ophiorrhizae Rae. valde appropinquat.

GUIGNARDIA Viala et Rav.— Laestadia Anersw.— Syll. I p. 420, IX p. 577, XI p. 289, XIV p. 516, XVI p. 455, XXII p. 72.

1. Guignardia Iusticiae F. L. Stevens, Bot. Gazette 69., 1920, p. 255, 5851 tab. XIV fig. 23-24. — Maculis indefinitis demum flavidis v. pallidis; peritheciis in maculis aeque distributis 1-2 mm., inter se remotis; peritheciis globosis in folio omnino hypertrophico galliformi immersis 265  $\mu$  diam., parietibus obscuris parenchymaticis e cellulis usque 34  $\mu$  cr. efformatis, ostiolo lato praeditis; paraphysibus nullis; ascis clavatis plerumque longe pedunculatis, parte majore 17-20  $\approx$  61, totis usque 125  $\mu$  long., octosporis; sporidis inordinatis, hyalinis, unilocularibus, ovoideis, 9-10  $\approx$  18.

Hab. in foliis Justiciae verticillaris (Acanthaceae), El Yunque, El Gigante, El Alto de la Bandera, in Porto Rico, America Centr.

2. Guignardia irritans Setch. et Estee in Estee, Univ. of California 5852 Publications in Botany v. IV, 1913, n. 17 p. 311 tab. 35. — Peritheciis immersis, sphaericis 522-922 μ diam., poro apicali cylindrico apertis, contextu pseudoparenchymatico incoloro evanido; ascis clavatis octosporis 90-145 × 9-30; sporis hyalinis oblongo-ellipsoideis

ntrinque acute apiculatis 30-45 \* 9-13, maturis unilocularibus medio zonula granulata instructis. - Pycnidiis oblongo ovoideis 444-622 µ long. 277-444 μ latis, coeterum peritheciis valde similibus; sporulis hyalinis late ellipsoideis  $3 \times 1.5$  a sterigmatibus simplicibus, seriatim abstrictis et in gelatina hyalina obvolutis.

Hab, parasitica in frondibus prope vesiculas aeriferas seriatas Cystoseirae osmundaceae et Halydrios dioicae (Algae), prope San Pedro in ditione Californiensi, Amer. bor. (SARAH P. MONKS et D. N. L. GARDNER). - Protuberantias gallaeformes, usque ad 20 mm. diam., processibus digitiformibus e centro solidiore radiantibus compositas preducit.

3. Guignardia albicans Rehm, Ascomyc. Philipp. VI, Leaflets of Phi- 5853 lipp. Botany, VI (1914) p. 2258.— Peritheciis in maculis epiphyllis discoidalibus, 0,5-3 cm. latis, mox in toto epiphyllo confluentibus, albidulis plurimis gregariis, peridermio innatis, globulosis, 1,2 mm. latis, non ostiolatis, siccis nigritulis, excipulo parenchymatico flavidulo; ascis clavatis, apice rotundatis, sessilibus, aparaphysatis, 60 × 15; sporidiis distichis, cylindraceis, utrinque obtusis, rectis, continuis, hyalinis, 18-20 × 5-7.

Hab. in foliis Hoyae luzonensis (Asclepiadaceae), Los Baños, ins. Philipp. (C. F. BAKER).

4. Guignardia? apiahyna (Speg.) Sacc., Laestadia? apiahyna Spegaz., 5854 Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 97. — Maculis arescentibus, subpellucidis ex albo subcinerascentibus, saepius dimidium superum foliorum totum occupantibus, determinatis et fere semper lineola fusca callosa limitatis; peritheciis epiphyllis sparsis v. hinc inde laxe gregariis parenchymate innatis, epidermide tectis, parvulis, 100-150 μ, nigris, superne planiusculis inferne convexis, astomis?, crasse membranaceis (20 μ), contextu grosse parenchymatico atro parum perspicuo, nucleo albo farctis; ascis obelavatis, superne obtuse rotundatis basi minute crasseque pedicellatis, 40-60 × 12-14, aparaphysatis octosporis; sporidiis ellipsoideis, utrinque plus minusve acutiuscule rotundatis, rectis, grosse 1-2-guttulatis, levibus, hyalinis, 12-14 > 6-7.

Hab. in foliis vivis Bignoniaceae cujusdam, prope Apiahy, America austr. (J. Puiggari).

5. Guignardia creberrima Syd., Enum. Philipp. Fungi II, in Philipp. 5855 Journ. of Sci. VIII (1913) p. 482. - Maculis amphigenis, magnis, 1-6 cm. longis, saepe confinentibus et magnam folii partem occupantibus, griseis vel ochraceo-griseis, linea angusta obscure pur-

purea cinctis; peritheciis epiphyllis vel amphigenis, numerosis, plerumque per totam maculam dense dispositis, immersis, tandem vertice plus minusve prominulis, globulosis, atris, 120-175  $\mu$  diam., membranaceo-coriaceis, contextu opace parenchymatico e cellulis 6-8  $\mu$  diam. composito; aseis fasciculatis, clavatis vel clavato-saccatis, apice rotundatis et leniter incrassatis, breviter stipitatis, 60-90  $\approx$  16-20, octosporis, paraphysibus genuinis nullis; sporidiis plerumque fere distichis, continuis, ellipsoideo-oblongis, utrinque late rotundatis, hyalinis, saepe grosse 2-guttatis, crasse tunicatis, 15-16,5  $\approx$  8-9.

Hab. in foliis vivis Capparidis horridae (Capparidaceae), Luzon, prope Manila, ins. Philipp. (MERRILL).

6. Guignardia traversoana Gonz. Frag., Flor. Hispal. Microm. in Trab. 5856 Mus. Nac. de Cienc. Nat. Madrid, Ser. Bot. n. 10, 1916, p. 73.— Peritheciis numerosis, sparsis vel gregariis, globoso-depressis, caulicolis, subepidermicis, numerosis, dein erumpentibus, atris, membranaceis, 80-200 μ diam., usque 90 μ alt., ostiolo minuto usque 18 μ diam., excipulo crasso minute celluloso; ascis clavatis, apice rotundatis, crasse tunicatis, subpedicellatis, 42-54 × 10-14; sporidiis distichis, vel curvulis oblongo-clavatis, 40-50 × 12-22; sporidiis tristichis vel conglobatis, sporidiis hyalinis, oblongis, utrinque obtusis, vel attenuatis guttulis majoribus et minoribus repletis et irregulariter sparsis, vel granulosis, 14-18 × 3,5-4.— (Sect. Euguignardia Trav.).

Hab. in ramulis vivis vel emortuis Lonicerae implexae (Caprifoliaceae), prope Pedroso de la Sierra, Sevilla (Hispania).

7. Guignardia biennis (Dearness) Sacc., Laestadia biennis Dearness, My-5857 cologia 1916, p. 98. — Peritheciis epiphyllis, nigris, subglobosis, apice pertusis, 180-360 μ diam.; ascis fusoideis, sessilibus, paraphysatis, 40-50 × 7-9; sporidiis subdistichis, oblongo-ellipsoideis, utrinque guttulatis, continuis, 8-11 × 3-4.

Hab. in foliis basilaribus Solidaginis junceae (Compositae), pr. Byron Ont., Canada, Amer. bor. (Dearness).—Auctumno folia decolorantur ibique sclerotia subglobosa  $240 \approx 140$  nigra generantur; vere subsequente perithecia evolvuntur.

8. Guignardia Steppani Petrak, Ann. Mycol. 18., 1920, p. 111. — Pe-5858 ritheciis plerumque hypophyllis laxe gregariis v. omnino sparsis, primum immersis demum erumpentibus et prominentibus depresse rotundatis 90-120 μ diam., apice poro irregulari 30 μ lato praeditis, contextu brunneo crasso parenchymatico; ascis cylindraceo-clava

tis, apice late rotundatis basi angustatis sessilibus v. brevissime pedicellatis, octosporis, 32-44 > 5-7; sporidiis mono-v. subdistichis, ovoideis v. ellipsoideis, utrinque late rotundatis, raro infra acutatis, hyalinis, unilocularibus, plasmate minute granuloso farctis, rectis raro parum inaequalibus, 6-8 × 3-4. Paraphysibus nullis.

Hab, in foliis siecis Solidaginis virgae-aureae (Compositae), Bernklau prope Theusing, Egerland, Bohemia (R. STEPPAN).

9. Guignardia Synedrellae Syd., Ann. Mycol. 14., 1916, p. 360, — Pe- 5859 ritheciis sparsis vel laxe gregariis, subepidermicis, applanato-globosis, 125-160 µ diam, ostiolo rotundo, contextu brunneo parenchymatico ex cellulis 7-10 µ diam. formato; ascis fasciculatis, aparaphysatis, fusiformibus, sessilibus, 45-55 \* 11-13, octosporis; sporis ovatis, utrinque obtusis vel uno fine leniter attenuatis, continuis. hyalinis, oblique monostichis usque distichis,  $10-12 \times 5-6$ .

Hab. in caulibus emortuis Synedrellae nodiflorae (Compositae), in consortio Rhabdosporae Sinedrellae, Los Baños, ins. Philipp. (E. Sablan).

 Guignardia Araucariae G. Sous. da Camara, Myc. novi mycoff, Lu- 5860 sit., in Revista agronom., Lisbon 1920, Extr. p. 4.—Peritheciis immersis, solitariis gregariisve, plerumque geminatis, subglobosis depressisve nigrisque; ascis aparaphysatis, plus minus claviformibus, hyalinis, rectis curvulisve, sursum rotundatis deorsumque attenuatis, leniter pediculatis, octosporis, 55-65 \* 12-15; sporidiis ellipsoidec-oblongis vel oblongo-cylindraceis, continuis, granulosis, rectis, achrois, utrinque rotundatis, distichis vel subdistichis,  $20-28 \times 10-12$ .

Hab. in foliis Araucariae imbricatae Pav. (Coniferae), pr. Sintra, Lusitaniae.

11. Guignardia Cephalotaxi (Syd. et Hara), Laestadia Cephalotaxi Sydow 5861 et Hara in H. et P. Sydow, Ann. Mycol. XI, 1913, p. 57. - Peritheciis hypophyllis, plerumque aequaliter sed densiuscule per totam superficiem sparsis, immersis, tectis, applanato-globosis, atris, 100-160 a diam. pertusis, glabris, submembranaceis, contextu subopaco ex cellulis 7-11 μ long. 6-9 μ latis composito; ascis clavatis, apice late rotundatis et non vel leniter incrassatis, fasciculatis, 60-84 \* 15-18, octosporis; sporidiis plerumque irregulariter distichis, ovoideis v. ellipsoideis, continuis, crebre guttulatis, hyalinis, 12-16 × 6-7.

Hab. in acubus Cephalotaxi drupaceae (Coniferae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

12. Guignardia Rhynchosporae F. L. Stevens, Trans. Ill. Ac. of Sc. v. 5862 X, 1917, p. 184. — Peritheciis sphaeroideis, in hypophyllo apertis,

in epiphyllo inconspicuis subepidermicis 235  $\mu$  circ. cr.; paraphysibus nullis; ascis elongatis, angustis, longe pedunculatis, 140-156  $\approx$  7, octosporis; sporidiis bilocularibus hyalinis 27  $\approx$  5, medio crassioribus, utrinque angustatis.

Hab. in foliis Rhynchosporae Cyperoidis (Cyperaceae), Marti Peña, Porto Rico, Amer. Centr.

13. Guignardia scirpicola Grabowski, Bull. Soc. Myc. Fr. XXXIII (1917) 586 p. 75, c. ic. — Maculis oblongis, albis, fusco-limitatis, ad 5 cm. longis; peritheciis 85-130 μ diam., sparsis, membranaceis, roseis, subperspicuis, ostiolo brevi atro praeditis; ascis cylindraceis, basi attenuatis, nonnumquam curvulis, tunica apice perforata, 60-65 \* 14; sporidiis subdistichis, ellipsoideis, leviter curvulis, saepe inaequilateris, hyalinis. 15-18 \* 4-6.

Hab. in foliis vivis Scirpi silvatici (Cyperaceae), Kraswooka, Podolia, Bossia. — Perithecia rosea describuntur, an ergo potius Nectriella?

14. Guignardia fusco-coriacea Rehm, Ascomyc. Philipp. V, Leaflets of 5864 Philipp. Botany, VI (1914) p. 2195.— Peritheciis epiphyllis in maculis fusco-siccis usque ad nervum medianum extensis, obscurius marginatis, usque ad 12 cm. longis, 2-3 cm. latis creberrime innatis, vix 100 μ diam., excipulo tenui, parenchymatico, fusco viólaceo, glabris, poro pertusis; ascis aparaphysatis, fusiformibus, sessilibus, octosporis, 50 × 9-10; sporidiis distichis, oblongis vel ellipsoideis, interdum clavatis, 1-2-guttulatis, hyalinis, 10-12 × 4,5-5.

Hab. in foliis vivis Antidesmatis (Euphorbiaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

15. Guignardia Euphorbiae·spinosae Bubàk, III Beitr. Pilz. Montenegro, 5865 in Botanikai Közlemények, 1915, p. (56). — Peritheciis expansis, laxe gregariis, subepidermicis, globoso-conicis, 100-150 μ in diam., basi applanatis, apice conico-erumpentibus, atris, contextu grosse parenchymatico, atrofusco, apice crassiore; ascis fasciculatis, oblongis, 40-50 × 10-13, rectis vel curvatis, apice rotundatis et incrassatis, basi breve pedicellatis, octosporis, aparaphysatis; sporidiis tristichis, fusoideis, 11-18 × 2,5-3,5, utrinque attenuatis, hyalinis, continuis.

Hab. ad ramulos emortuos Euphorbiae spinosae (Euphorbiaceae), Njegusi, Montenegro.

16. Guignardia Heveae Syd., Ann. Mycol. 14., 1916, p. 360.— Maculis 5866 vagis plerumque ex apice vel marginibus foliorum ortis postremo magnam folii partem vel totum folium occupantibus, aridis albi-

cantibus; peritheciis plerumque epiphyllis, dense confertis, immersis, epidermidem elevantibus et vertice per eam erumpentibus, globulosis, 80-120  $\mu$  diam., poro rotundo pertusis, contextu parenchymatico, cellulis 8-10  $\mu$  diam., obscure olivaceo-brunneo; ascis fasciculatis, clavatis vel saccato-clavatis, apice rotundatis et leniter incrassatis, basi in pedicellum brevem attenuatis, 8-sporis, aparaphysatis, 40-50  $\times$  12-14; sporidiis distichis, continuis, hyalinis, ovatis, 6-8  $\times$  4-5.

Hab. in foliis languidis Heveae brasiliensis (Euphorbiaceae), Los Baños, ins. Philipp. (C. F. BAKER).

17. Guignardia Manihoti Sacc., Ann. Mycol. XII, 1914, p. 304. — Peritheciis gregariis, punctiformibus, epidermide initio velatis, globulosis, 90-120 μ diam., poro pertusis, contextu distincte parenchymatico fulvo-fuligineo; ascis clavatis, apice rotundatis lumineque integro, breviter obtuse stipitatis, 62 × 12-14, aparaphysatis, octosporis; sporidiis distichis v. subtristichis ovato-ellipsoideis, 12-14 × 4,5-6, subinde leviter curvis, 1-2-guttulatis, continuis, hyalinis.

Hab. in ramis emortuis M a n i h o t u t i l i s s i m a e (Euphorbiaceae), Los Baños, Luzon, Ins. Philippin. (M. B. RAIMUNDO).—Var. deminuta Sacc., Notae Myc. XX, Nuovo Giorn. bot. it. 23., 1916, p. 200. — Omnibus partibus minor; peritheciis hinc inde congregatis, globoso-depressis, pertusis 90-100 μ diam., ostiolo 15 μ lato; ascis clavulatis 26-30 × 6, rosulatis, aparaphysatis; sporidiis oblique monostichis v. distichis, tereti-oblongis, typice 4-guttulatis, continuis, hyalinis, 7 × 2,3-2,5. — Hab. in caule emortuo M a n i h o t i s u t i l i s s i m a e, Los Baños. — An sit status peculiaris immaturitati species inquirendum. — Var. Cajani Sacc., Notae Myc. XXIII p. 63 (Acc. Veneto-trent. 1917).— Peritheciis 90-110 μ diam. ostiolo 9-12 μ diam. pertusis; ascis 35-40 × 9-10; sporidiis distichis 12-14 × 4,5-6.— In caulibus emortuis C a j a n i i n d i c i (Leguminosae), Los Baños, (M. B. RAIMUNDO, comm. BAKER). — Ad Physalosporam guignardioidem Sacc. valde accedit tam species quam varietas.

18. Guignardia festiva (Syd.) Sacc., Laestadia festiva Syd. in Leaflets 5868 of Philipp. Bot. V (1912) p. 1543. — Maculis sparsis, omnino circularibus, distinctissimis, 3-6 mm. diam., albidis vel albido-ochraceis, fusco-marginatis; peritheciis numerosis in quaque macula, immersis, vertice prominulis, globosis, atris, membranaceis, 100-130 μ diam.; ascis cylindraceis vel cylindraceo-clavatis, fasciculatis, apice rotundatis, leniter incrassatis, aparaphysatis, subsessilibus vel breviter stipitatis, 45-75 × 13-17, octosporis; sporidiis oblique mono-

5867

stichis vel distichis, ellipsoideis vel oblongo-ellipsoideis, utrinque obtusis, continuis, hyalinis, intus minute guttulatis,  $10-16 \times 5-7$ .

Hab. in pagina superiore foliorum vivorum Sumbaviopsidis albicantis (Euphorbiaceae), Brooks Point, Palawan, ins. Philipp.

19. Guignardia hambusina Rehm, Ascom. Philippin. VIII, in Leaflt. 5869 of Philippin. Bot. VIII, 1916, p. 2936.— Perithecia numerosissima, innata, epidermidem protuberantia, interdum rimose findentia, plerumque solitaria, rarius linealiter aggregata, globulosa, minutissime papillulata, nigra, glabra, 0,25 mm. lata, parenchymatice contexta; ascis clavatis, 60 × 10, 8-sporis; sporis fusiformibus, utrinque aeutatis rectis 1-cellularibus 1-2-guttulatis, hyalinis, 15-20 × 4, distichis paraphysibus nullis.

Hab. ad Bambusam (Graminaceae), emortuam, Los Baños, Ins. Philipp. (S. A. REYES).

20. Guignardia? bambusella Sacc. n. nov.—Syn. Guignardia? bambu- 5870 sina Sacc., Notae Mycol. XXIII p. 63 (Acc. Ven.-trent. 1917), an Rehm (1916).— Peritheciis in series breves subparallelas dispositis et epidermide rimosa diu tectis, globulosis, 90-100 μ diam. nigris, subastomis, membranaceis; ascis linearibus, brevissime stipitatis, 35 × 4,7, octosporis, aparaphysatis; sporidiis monostichis, oblongofusoideis, continuis, utrinque acutulis, hyalinis, 6 × 2,5 (immaturis?).

flab. in foliis emortuis B a m b u s a e sp. (Graminaceae), Los Baños, Ins. Philipp. — Dubia quia immatura observata, sed ob perithecia breviter seriata et epidermide veluti valvatim dehiscente tecta notabilis; series 0,5-1 mm. longa, 0,3 lata. An genuina Guignardia sp. !

21. Guignardia Dinochloae Rehm, Ascom. Philippin. VIII, in Leafit. of 5871 Philippin. Bot. VIII, 1916, p. 2936.— Perithecia gregaria, innata, peridermium protuberantia demum prorumpentia globulosa minute papillulata, nigra, glabra 0,25 mm. lata parenchymatice crasse fusce contexta; ascis clavatis crasse tunicatis apice rotundatis, 60-70 × 15, 8-sporis, J-, aparaphysatis; sporis oblongo-clavatis, rectis 1-cellularibus hyalinis, 18 × 6-7, distichis.

Hab. ad Dinochloam (Graminaceae), Los Baños, Ins. Philipp. (C. F. Baker).— Propter defectum paraphysium cum Guignardia humulinae Bub. aliisque in subg. Guignardiella Rehm, ponenda species.

22. Guignardia effusa (Rehm) Sacc., Laestadia Rehm, Ann. Mycol. XIII, 5872 1915, p. 4. — Perithecia gregaria, epidermide tecta, translucentia, globulosa, poro pertusa, nigra, 0,2 mm., parenchymatice contexta,

membranacea; asci clavati, apice rotundati,  $80\cdot100 \times 10\cdot15$ , 8 spori; sporae fusiformes, rectae, utrinque acutatae, hyalinae, 1-cellulares,  $22\cdot25\times6$ , distichae. Paraphyses nullae.

Hab. ad Milium effusum (Graminaceae), London Ont. Canada, Amer. bor. (Dearness). — A L. microspora in eadem matrice vigenti sporarum caracteribus diversa.

23. Guignardia Clusiae F. L. Stevens, Trans. III. Ac. of Sc. v. X, 1917, 5873 p. 183.— Maculis nullis. Peritheciis numerosis, sparsis hypophyllis, nigris subepidermicis 110-160  $\mu$  cr.; ascis cylindraccis octosporis, 65-72  $\times$  7, non paraphysatis; sporidiis ellipsoideis continuis, hyalinis,  $(17-20 \times 7)$ .

Hab, in foliis dejectis Clusiae Grundl de hii (Guttiferae), Maricao Porto Rico, America Centr.

24. Guignardia Nectandrae F. L. Stevens, Bot. Gazette 69., 1920, p. 5874 255. — Maculis foliicolis juventute indefinitis demum definitis subangulosis, 2-6 mm. diam., utrinque visibilibus; peritheciis utrinque prominentibus, infra copiosioribus, sparsis in mesophyllo hypertrophico profunde nidulantibus, parietibus tenuibus 70-85  $\mu$  diam. donatis pallidis; ascis clavatis octosporis  $100\text{-}116 \times 20$ ; sporidiis hyalinis ovoideis, bilocularibus,  $21\text{-}24 \times 8\text{-}10$ , septo plerumque excentrico praeditis.

Hab. in foliis Nectandrae coriaceae? (Lauraceae), Quebradillos, Porto Rico, Amer. Centr.

25. Guignardia Alhagii Budak in Ann. Naturh. Hofmus. Wien XXVIII 5875 (1914) p. 197. — Peritheciis densissime gregariis vel adpressis, plagulas 2-3 mm. longas efformantibus, immersis, epidermide tectis, varie globoso-depressis, 90-200 μ diam., nigris, excipulo crassiusculo, atro-fusco, grosse parenehymatico; ascis oblongo-obovoideis, breviter pedicellatis, apice angustatis ibique late rotundatis et fortiter incrassatis, aparaphysatis, octosporis, 60-80 × 20-25; sporidiis oblique di-vel tristichis, ellipsoideo-fusoideis, hyalinis, episporio crassiusculo praeditis, intus minute grumosis, 20-23 × 7,5-9,5.

Hab. in caulibus Alhagii camelorum (Leguminosae), prope oppidum Der-es-Sor, ad fines Mesopotamiae et Arabiae borealis.

26. Guignardia hispanica Bubàk et Frag., Hedw. LVII p. 4 (1915).— 5876 Peritheciis laxiuscule gregariis, globoso-depressis, 30-130 μ diam., immersis, subcutaneis, atris, contextu 20 μ cr., grosse parenchymatico atro-fusco ostiolo brevissimo erumpente; ascis oblongo-elavatis 55-75 × 16-22, apice subrotundatis, valde incrassatis, in pedicellum

brevem tenuatis, aparaphysatis, 8-sporis; sporidiis tristichis, fusoideis,  $20-25 \times 6-7$ , utrinque tenuatis, hyalinis, continuis, muco tenuissimo obvolutis.

Hab. in ramulis emortuis Coronillae junceae (Leguminosae), prope Pedroso de la Sierra, Hispaniae (Gz. Fragoso). — Affinis Guign. euganeae.

27. Guignardia galactina (Dearn. et House) Sacc., Laestadia galactina 5877 Dearn. et House, N. Y. St. Mus. Bull. n. 179 (1915) p. 34. — Peritheciis atro-brunneis, subcuticularibus, dense regulariter sparsis, plerumque epiphyllis, globosis, applanatis sed non depressis, 100-230 μ diam.; ascis aparaphysatis, octosporis, breviter pedicellatis, in medio latioribus, 60-75 × 25; sporidiis utrinque rotundatis, granulosis vel minute guttulatis; hyalinis, 25-30 × 6-7.

Hab. in foliis petiolisque languidis Galactiae aphyllae (Leguminosae), Biltmore N. C., Amer. bor.

28. Guignardia cahirensis (Steiner) Sacc., Laestadia cahirensis Steiner, 5878 Beitr. z. Lich. Griechenl. u. Egypt. p. 171; Vouaux, Bull. Soc. Mycol. Fr. 1912, p. 219. — Peritheciis in areolis mycelicis brunneocinereis ortis, hemisphaerico-depressis, ostiolo simplici, nigris, nitidis usque ad 200 μ diam.; ascis ellipsoideis v. claviformibus, octosporis; paraphysibus nullis; sporidiis forma variabilibus, cylindraceis, ellipsoideis v. ovoideis, utrinque rotundatis, 14-16 ≈ 6,4-7,6.

Hab. in thallo decolorato demum brunneo-plumbeo Caloplacae gilvellae (Lichenes), Egypto (STEINER).

29. Guignardia Olivieri (Vouaux) Sace., Laestadia Olivieri Vouaux, Bull- 5879 Soc. Mycol. Fr. 1912, p. 216, Verrucaria Xanthoriae (Wedd.) fm. megaspora Oliv., Par. lich. Fr. Suppl. p. 14.— Peritheciis gregariis numerosis, omnino immersis ostiolo punctiformi tantum prominulis, sphaeroideis 112-190 μ diam.; contextu crasso, supra brunneo-olivaceo, infra hyalino, pseudoparenchymatico, cellulis 4-6 μ diam. efformato, polygoniis v. circa ostiolum elongatis; ascis ovoideis, obpiriformibus v. late clavatis, supra late rotundatis, pedicello brevissimo crassoque praeditis tunica praecipue ad apicem incrassata, octosporis, 39-62 × 16-24; paraphysibus nullis; sporidiis plus minus distincte distichis, oblongis, saepe parum inaequilateris, tunica crassa donatis, simplicibus, hyalinis v. senectute leniter flavidulis, plerumque multiguttulatis, 16-23,5 × 6-8 (vel sec. Olivier, 15-22 × 5-6).

Hab. in thallo X and thoriae pariet in ae, prope Béziers et Colombiers-les-Béziers, Herault, Gallia (A. DE CROZALS) et Lecaniae prosechoides Nyl. (Lichenes), Caithless, Scotia (ED. LELLIE).

30. Guignardia istriaca Bubàk in Jaap, Ann. Mycol. 14., 1916, p. 12.— 5880 Peritheciis amphigenis, regulariter sparsis, innatis, copiosis, epidermide velatis, depresse globosis, 100-150 μ diam., nigris, contextu parenchymatico crassiusculo brunneo-nigricante, centro poro aperto; ascis fasciculatis, ovato-clavatis, 45-65 × 15-20, apice late rotundatis incrassatisque, basi attenuatis breviterque stipitatis, aparaphysatis, octosporis; sporidiis tristichis, v. deorsum distichis, ellipsoideis v. oblongis, 15-20 × 5-6,5, rectis, utrinque rotundatis, deorsum angustatis, hyalinis, continuis, intus granulosis.

Hab. in cladodiis emortuis Rusci aculeati (Liliaceae), pr. Abbazia Istriae.

31. Guignardia pedrosensis Bubàk et Fragoso, Hedw. 57 (1915) p. 4.— 5881 Peritheciis dispersis, basi conicis ibidemque centro cylindrice protracto immersis, supra sphaerico-conicis, 200-250 μ diam., nigris, epidermide tectis, postea epidermidem disrumpentibus, contextu minute pseudoparenchymatico, atrofusco, intus flavidulo; ascis fastigiatis, elongato-clavatis, 65-95 × 14-18, apice rotundatis, incrassatis, basi breviter pedicellatis, octosporis, aparaphysatis; sporidis distichis vel subtristichis, fusoideis, 20-26 × 5-7, rectis, rarius subcurvulis vel inaequilateralibus, hyalinis, continuis.

Hab. in caulibus et ramulis siccis Smilacis asperae (Liliaceae), prope Pedroso de la Sierra, Sevilla, Hisp.—Status pyen. verisimiliter Macrophoma pedrosensis Bub. et Frag.

32. Guignardia Heterotrichi F. L. Stevens, Trans. III. Ac. of Sc. v. X, 5882 1917, p. 182. — Maculis irregulariter circularibus 2,5 mm. diam. colore coriario praeditis, linea 1 mm. lata marginatis centro nigris, contextu foliorum emortuo; peritheciis in centro macularum confertis, nigris, 150-200 μ diam., ostiolo parvo, 10-15 μ diam., sed distincto; paraphysibus nullis; ascis 51-61 × 14, octosporis; sporidiis inordinatis leniter olivaceis, ovato-ellipsoideis, 14-17 × 7.

Hab. in foliis Heterotrichi cymosi (Melastemataceae), Preston's Ranch, Maricao, Villa Alba, Utuado, in Porto Rico, Amer. Centr.

33. Guignardia Medinillae (Rangel) Sacc., Laestadia Medinillae Rangel, 5883 Bol. Agric. Sao Paulo 1915 p. 313 tab. V, fig. 1-3.— Maculis majusculis, marginalibus vel apicalibus, ad hypophyllum non vel vix perspicuis, ad epiphyllum concentrice-zonatis, pallide latericiis, margine lato atroque limitatis; peritheciis punctiformibus amphigenis, globosis vel subglobosis, simplicibus, vel rare 2-3 locularibus, in natis, epidermide tectis, ostiolo minute pertusis, 100-120 μ diam.;

ascis clavato-cylindraceis, apice rotundatis crasseque tunicatis, basi breviter pedicellatis, octosporis,  $60\text{-}65 \times 14\text{-}16$ , aparaphysatis; ascosporis distichis, saepius parte inferiore monostichis, imaequilateralibus etiamque medio inflatis, utrinque obtusis, rectis vel curvulis, nubiloso-guttulatis, continuis, hyalinis,  $12\text{-}16 \times 4\text{-}5$ .

Hab. in foliis vivis Medinillae magnificae (Melastomataceae), Icarahy prope Niteroy, Brasiliae (E. R.).

34. Guignardia Tetrazygiae F. L. Stevens, Bot. Gazette 69., 1920, p. 5884 255. — Maculis indefinitis, irregularibus, 1-2 cm. diam. v. totum folium occupantibus, colore coriario, centro perithecigeris; peritheciis nigris utrinque conspicuis, circ. 160  $\mu$  diam., crasse membranaceis; ascis octosporis, in parte sporifera ovoideis,  $45 \times 27$ , stipite longo angusto,  $30\text{-}60 \times 4\text{-}5$ , donatis; paraphysibus nullis; sporidiis inordinatis, unilocularibus, hyalinis, ovoideis, obtusis,  $24 \times 10$ .

Hab. in foliis Tetrazygiae sp. (Melastomataceae), San German, Vega Alta, Porto Rico, America centr.

35. Guignardia Puiggari (Speg.) Sace., Laestadia Puiggarii Spegaz., Rel. 5885 Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 98. — Maculis indeterminatis difformibus albido ochroleucis; peritheciis hypophyllis, sparsis v. laxissime gregariis parenchymate innatis, epidermide tectis, udis sublenticularibus, 100-150 μ diam., siccis cupulato-collabescentibus, atris membranaceis, grosse angulateque cellulosis, ostiolo latissimo (40 μ) perforatis; ascis obclavatis, sursum attenuatis apiceque subtruncato-rotundatis, deorsum late rutundatis pedicello brevissimo nodulosoque suffultis, aparaphysatis, octosporis, 45-50 × 15-18; sporidiis oblique distichis, cylindraceo-subellipsoideis, 18-22 × 6, rectis v. leniter inaequilateralibus, utrinque rotundatis, centro vage grosseque 1-guttulatis hyalinis.

Hab. ad folia emortua dejecta Guareae? sp. (Meliaceae), in silvis prope Apiahy, America austr.

36. Guignardia sydowiana Trotter n. nov. — Syn. Guignardia Musae 5886 (Syd., Ann. Myc. 10., 1912, p. 80) Tr., non G. Musae Raciborski 1909. — Peritheciis epiphyllis, aequaliter denseque distributis, v. hinc inde paucis maculiformiter aggregatis, globosis, atris, 90-120 μ diam., pallide papillatis, contextu opaco; ascis fasciculatis, aparaphysatis, cylindraceis v. clavato-cylindraceis, apice rotundatis, leniter incrassatis, breviter stipitatis, 50-70 × 10-15, octosporis; sporidiis oblongis, utrinque rotundatis continuis, hyalinis, medio plerumque incrassatis, 10-11 × 3-5, distichis, an tandem spurie septatis (?).

Hab. in foliis languidis vel subemortuis Musae (Musaceae), Kisantu Kongo. Africae (VANDERYST).

37. Guignardia Cabelludae (Bangel) Sacc., Laestadia Cabelludae Bangel, 5887 Fungi do Bres. in Arch. Mus. Nac. Rio Jan. 1917, p. 161, VI f. 12-14. — Maculis majusculis, 1-2 cm. diam. amphigenis, sparsis v. confluentibus, saepius secus nervos medios dispositis, brunneolis demum luteolis, inferne junioribus obscuris; peritheciis minutis, punctiformibus, epiphyllis v. laxe aggregatis, globosis v. subglobosis v. irregulariter conoideis, membranaceis, innatis, prominulis ostiolo papillato, atris, 120-160 \( \mu\) diam.; ascis cylindraceo-clavatis, octosporis, apice rotundatis incrassatis (junioribus crassioribus), aparaphysatis 50-60 \* 15-18; sporidiis oblongis, medio inflatis, utrinque rotundatis, conglobatis, v. subdistichis, hyalinis, 12-16 × 5-6.

Hab. in foliis vivis Eugeniae Cabelludae (Myrtaceae), Niteroy, Brasiliae.

38. Guignardia Cambucae (Rangel) Sacc., Lacstadia Cambucae Rangel, 5888 Fung. do Bres. in Arch. Mus. Nac. Rio Jan. p. 161 t. VI f. 10-11. — Maculis amphigenis 1-3 mm. diam., rotundatis, elongatis v. irregularibus, sparsis v. confluentibus, superne cupreis, linea atro-purpurea limitatis, inferne pallide viridibus, anulo pallescente demum nigro circumdatis; peritheciis epiphyllis, sparsis, punctiformibus, subsphaericis v. depresse conoideis, immersis, velatis dein erumpentibus, ostiolo perforatis, papillatis; contextu parenchymatico, atris, 120-160 \( \mu\) diam.; ascis aparaphysatis, clavulatis, breviter pedicellatis, apice rotundatis, incrassatis, octosporis, 90-100 > 18-22; sporidiis subdistichis, ovoideis, utrinque rotundatis, quandoque grosse 1-guttatis, hyalinis,  $18-20 \approx 8-10$ .

Hab. in foliis vivis Marliereae edulis (Myrtaceae), Niteroy, Brasiliae.

39. Guignardia lasmini (Petch) Sacc., Laestadia Jasmini Petch, Ann. 5889 R. Bot. Gard. Peradeniya, v. VI, P. III, 1917, p. 223. — Maculis rotundatis, 3-4 mm. diam., albis, aridis, peritheciis subepidermalibus, 0,1-0,2 mm. diam., nigris; ascis clavatis, octosporis, sporis biseriatis, 54-56 × 8-9. Sporis ovalibus vel subcymbiformibus, obtusis, hyalinis, continuis, 12-15 \* 5-6.

Hab. ad folia Jasmini flexilis (Oleaceae), Hakgala, Ceylon.

40. Guignardia jasminicola Gz. Frag., Intr. Flor. Microm. Catal. 1917, 5890 p. 83. -- Peritheciis sparsis, immersis, globosis, nigris, epidermide velatis, 300 µ diam., ostiolo papillato erumpente; contextu paren-

chymatico, fuligineo, crassiuscule membranaceo; ascis aparaphysatis, oblongo-clavatis v. ovoideis, subsessilibus, crasse tunicatis, rectis v. curvulis, 54-70 × 15-20, apice rotundato; sporidiis distichis v. inordinatis, ovoideo-oblongis, hyalinis, intus granulosis, 15-18 > 6,5-7, raro 21 \* 8.

Hab. in ramulis emortuis Jasmini officinalis (Oleaceae). culti in Horto S. Gervasio Barcelona, Hispaniae (CABALLERO). -Socia adest Macrophoma jasminicola Gz. Frag.

41. Guignardia Arecae Sacc., Notae Myc. XXIII p. 63 (Accad. Ven. 5891 trent. 1917). — Maculis suborbicularibus majusculis, 15-20 mm. lat. sordide isabellinis, dilute brunneo-cinetis, demum griseis, distinctius epiphyllis: peritheciis gregariis globoso-lenticularibus, 90-120 µ diam., poro 18 µ diam. pertusis, nigricantibus; contextu dense celluloso atro-fuligineo; ascis oblongo-clavatis deorsum obtuse tenuatis, subsessilibus, 45-54 × 14-16, aparaphysatis; sporidiis distichis, elliptico-oblongis, utrinque praecipue apice rotundatis, 12-14,5 × 5,5-6, hyalinis, nubilosis.

Hab. in foliis emortuis Arecae Catechu (Palmae), Los Baños, Ins. Philipp. — Imprimis maculis peculiaribus dignoscenda species.

42. Guignardia Arengae Rehm, Ascomyc. Philipp. V, Leaflets of Phi-5892 lipp. Botany, VI (1914) p. 2195. - Peritheciis gregariis, folio immaculato innatis, lenticularibus, 200 u diam., epidermidem protuberantibus, minutissime papillulatis, fusco-membranaceis, elapsis foveolam nigram relinquentibus; ascis ventricoso-ellipsoideis, sessilibus, aparaphysatis, 40 \* 20; sporidiis oblongis, utrinque rotundatis, rectis, ample 1-guttatis, hyalinis, 15-18 \* 6-8.

Hab. in foliis emortuis Arengae mindorensis (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). — G. Musae Rac. proxima videtur.

43. Guignardia Freycinetiae Rehm, Ascomyc. Philipp. I, in Philipp. 5893 Journ. of Sci. VIII (1913) p. 184. - Peritheciis in utraque foliorum pagina sparsis, subdimidiatis, convexulis, nigris, minute papillulatis, poro pertusis, glabris, excipulo membranaceo, pseudoparenchymatice, haud centrifuge contexto, fusco; ascis fusiformibus, distincte stipitatis, octosporis, usque ad 70 × 9, paraphysibus filiformibus tenuibus, obvallatis; sporidiis bacillaribus, rectis, infera parte acutatis, 1-cellularibus, hyalinis, ca. 25 \* 2,5-3, in asci superiore parte 3-4-stichis.

Hab, in foliis emortuis Freycinetiae (Pandanaceae), Luzon,

prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

44. Guignardia pipericola F. L. Stevens, Trans. III. Ac. of Sc. v. X, 5894 1917, p. 183. — Maculis circularibus 3-8 mm. diam., contextu foliorum parum mutato; peritheciis numerosis 150 μ diam. v. oblongis et 280 × 150, nigris, in contextu foliorum hypertrophico verruciformi immersis; ascis aparaphysatis, longe pedicellatis, 85 × 17, pedicello dimidium ascis aequante; sporidiis ovoideis hyalinis continuis, inordinatis, 13 17 × 5.

Hab. in foliis Piperi medii et marginati (Piperaceae), pluribus locis Porto Rico, Amer. Centr.

45. Guignardia adeana Rehm, Ascomye. Exsice. fasc. 51, n. 2016, Ann. 5895 Mycol. X, 1912, p. 537. — Peritheciis subgregariis, plerumque paginae superiori folii late flavidulae innatis eamque protuberantibus, globulosis, papillula minutissima prorumpentibus, membranacee contextis glabris, 0,3 mm. latis; ascis cylindraceo-subfusiformibus, haud stipitatis, apiee rotundatis, 130-140 × 25, octosperis; sporis oblongis, utrinque obtusis, 1-cellularibus, hyalinis, demum dilutissime flavescentibus, 20-24 × 9-11, strato mucoso tenui obductis, 1-2-stichis, paraphysibus nullis.

Hab. in foliis Polygalae Chamaebuxi (Polygalaceae), Wiesenfels, Jura (ADE). — Lacstadiae Rhododendri (D. N.) Sacc. proxima.

46. Guignardia Plectroniae Syd., Ann. Mycol. 15., 1917, p. 207.— Perithecia ramos longe lateque ambientia dense aequaliterque disposita, vix discreta, sive pluria dense gregaria, sed non confluentia, globosa, 150-180 μ diam., ostiolo minuto per epidermidem erumpente, pariete membranaceo parenchymatice e cellulis 8-10 μ diam., contexto, sub micr. obscure flavo-olivacea; asci superne saccati, tenuiter tunicati, p. sp. 40-55 × 18-22, octospori, aparaphysati; sporae distichae vel conglobatae, late ellipsoideae, ovatae vel oblongae, continuae, late rotundatae, hyalinae, 15-18 × 8-9.

Hab. in ramis emortuis Plectroniae monstrosae (Rubiaceae), Los Baños, Ins. Philipp. (C. F. BAKER).

47. Guignardia Ailanthi (Grove) Sacc., Laestadia Ailanthi Grove, Bull. 5897 Misc. Inform. R. Bot. Gard. Kew 1919, n. 4, p. 198, cum icon.— Perithecia subdense sparsa, membranacea, lentiformia, atra, ca. 150 μ diam., tecta, dein erumpentia. Asci clavulati, 60 × 10, paraphysibus nullis visis. Sporidia disticha, ovali-fusoidea, intus granulosa ac leviter guttulata, 12-14 × 4-5.

Hab. in ramulis Ailanthi (Simarubaceae), Aiken, Carolina

austr., Amer. bor. (RAVENEL, Fungi N. Amer. n. 2172).

48. Guignardia Helicteres F. L. Stevens, Trans. Ill. Ac. of Sc. v. X, 5808 1917, p. 183. — Maculis colore coriario, circularibus, arescentibus 8-5 mm. diam., definitis linea purpurea marginatis, peritheciis immersis, obscuris, 125-160 μ diam., ostiolo zona obscura limitato; paraphysibus nullis, ascis octosporis, 68 × 14-17; sporidiis oblongis obtusis continuis hyalinis, 17 × 5.

Hab. in foliis Helicteres jamaicensis (Sterculiaceae), Barceloneta Porto Rico, Amer. Centr.

49. Guignardia Sterculiae Rehm, Ascomyc. Philipp. V, Leaflets of Phisese lipp. Botany VI (1914) p. 2194. — Peritheciis plerumque maculis epiphyllis, demum totam superiorem paginam nigro-viridulo colorantibus gregarie innatis, semiglobosis, apice denigratis, poro haud perspicuo, membranaceo-contextis, glabris, 0,2 mm. latis; ascis clavatis, apice rotundatis incrassatisque aparaphysatis, octosporis, 80 × 12; sporidiis distichis ovoideo-elongatis, 1-cellularibus, hyalinis, guttulis oleosis repletis, 18 × 8-9.

Hab. in foliis Sterculiae foetidae (Sterculiaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

50. Guignardia tunetana (Pat.) Sacc., Laestadia tunetana Pat., Enum. 5900 Champ. Tunis. p. 12 (1892), Sacc. Syll. XIV p. 517.

Hab. in eaulibus emortuis Pituranthi chloranthi (Umbelliferae), Tarhuna Tripolitania (R. Pampanini). — Videtur forma minor: pycnidiis 130-140 μ diam., ostiolo 16-18 μ diam. pertusis; ascis  $60-70 \times 14-16$ , aparaphysatis; sporidiis oblongo-fusoideis, acutulis,  $15-16 \times 4,5-4,7$ , nubilosis, hyalinis, distichis. Sed dimensiones paullo minores a fungo minus evoluto pendere videtur (Sacc. Notae Myc. XX, Nuovo Giorn. bot. it. 23., 1916, p. 225).

51. Guignardia durmitorensis Bubàk, III Beitr. Pilz. Montenegro, in 5901 Botanikai Közlemények, 1915, p. (55). — Peritheciis laxiuscule gregariis, applanatis, 150-200 μ in diam., epidermide tectis, postea apice erumpentibus, demum epidermide destitutis, nigris, nitidis, contextu crasso, nigro-castaneo, pseudoparenchymatico; ascis oblongis vel oblongo clavatis, 45-55 μ longis, 11-15 μ latis, crasse tunicatis, apice rotundatis et ibidem, praecipue in lateralibus valde incrassatis, basi breve pedicellatis, hyalinis, aparaphysatis; sporidiis fusoideis, 17-20 μ longis, 3-4 μ latis, rectis, utrinque attenuatorotundatis, hyalinis, continuis.

Hab. in caulibus emortuis Valerianae montanae (Valerianaceae), Durmitor, Lokvice, Montenegro. — Socia adest Rhab-

dospora fusariispora Bub.

- DISCOSPHAERINA v. Höhnel, Fragm. z. Mykol. XX n. 1031 p. 1 in Sitzb. k. Ak. d. Wiss. Wien, 1917; Ber. deutsch. bot. Ges. 35., 1917, p. 248 (nomen nudum). A Guignardia differt fabbrica peritheciorum (?). Typ. gen.:
- Discosphaerina discophora v. Höhnel, l. c.— P. Strasser, Verh. Zool. 5902
   bot. Ges. Wien, 69., 1919, p. 361. Descriptio nulla.

Hab. in foliis siccis Solidaginis Virgae-aurea (Compositae), Sonntagberg, Austria inf. (STRASSER).

- \*) GLOMERELLA Schenk, et Spauld. Syll. XVII p. 573, XXII p. 77.
- 1. Glomerella Anthurii Montemartini, Riv. di Patol. Veget. 1915, p. 5903 237. Peritheciis lageniformibus, pilosis, solitariis, basi 120-150  $\mu$  diam.; ascis clavatis, sessilibus, 80-85  $\mu$  longis, gracilibus; sporidiis octonis, hyalinis, continuis, leniter curvulis, 18-20  $\approx$  4-5.

Hab. in foliis Anthurii (Araceae), in Horto Botanico Papiae, Italia bor.

2. Glomerella Cinnamomi Yoshino, Bot. Mag. Tokyo, 1907, pp. 230-232 tab. V; Tanaka, Mycologia 1922, p. 82. - Mycelium primum hyalinum dein fulvum, septatum, hyphis coloratis, septatis, 2-3,5 µ cr.; acervulis (status conidicus Glocosporium Yoshinoi Sacc. n.) minute tubercolatis, subepidermicis, dein erumpentibus, pallide rubris; stromate disciformi brunneo; conidiophoris densis; conidiis oblongis, saepe ovoideis, ellipsoideis v. cuncatis, saepe parum curvatis, 1-2v. non guttulatis, hyalinis, in massa pallidis, magnitudine variabilibus sed plerumque 10-18 \* 4-6; peritheciis subepidermicis, nigris punctiformibus, solitariis v. abbinatis, globosis v. globoso-depressis, apice leniter clavatis et ostiolo orbiculari 17-20 µ lato praeditis, brunneo v. brunneo cyaneo, 100-150 a crassis; ascis numerosis, fuscideis medio latioribus, apice angustatis, tunica apice saepe incrassata, 46-60 \* 8-13, octosporis, aparaphysatis; sporis oblongis, ntrinque angustatis, plerumque incurvatis, hyalinis, guttulatis v. non,  $10-15 \approx 3.5-5$ .

Hab. parasitica et noxia in foliis, petiolis, squamis ramulisque, praecipue plantularum cultarum C i n n a m o m i C a m p h o r a e

<sup>\*)</sup> Cfr. C. L. SHEAR et ANNA K. WOOD, Studies of fungous parasites belonging to the genus Glomerella, in Bur. of Plant Ind. Bull. 252, Washingt. 1913, opus tabulis 18 ornatum.

(Lauraceae), Japonia. - Syn. Guignardia Cinnamomi Hara.

3. Glomerella Musarum Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 590 P. III, 1917, p. 223. — Peritheciis erumpentibus vel liberis, nigris, 100-120 μ diam., ovatis, breviter rostratis, membranaceis; ascis clavatis 50-60 \* 10, octosporis uni-vel bi-seriatis; sporis hyalinis, continuis, cymbiformibus, rectis vel curvatis, obtusis, 14-18 \* 3,5-4.

Hab. in foliis Musae paradisiacae (Musaceae), Panadure, Ceylon, socia Glocosporii Musarum Cke. et Mass., Scolecotrichi Musac Zimm., etc.

## APIOSPOROPSIS (Trav.) Mariani - Syll. XXII p. 78.

1. Apiosporopsis Coronillae Gz. Frag., Fungi Hort. Matrit. 1917, p. 11.— 5906 Peritheciis sparsis, subcutaneo erumpentibus, globosis v. lenticularibus 100·175 μ diam., membranaceis, non papillatis, ostiolo minutopertusis; ascis clavulatis, rectis curvulisve, breviter crassiusculeque pedicellatis, crasse tunicatis, apice rotundatis, aparaphysatis, 60-70 × 14·18; sporidiis irregulariter distichis, oblongis, utrinque rotundatis, rectis v. subflexuosis, hyalinis, primo granulosis denique prope basim spurie obsoleteque 1-septatis, 16·20 × 5·7, loculo imo minuto reactivi Azul ope non colorato.

Hab. in ramulis siccis C o r o n i l l a e e m e r o i d i s (Leguminosae), in Horto botanico Madrid, Hispaniae. — Species videtur perfecte distincta.

PHOMATOSPORA Sace. — Syll. I p. 432, IX p. 589, XI p. 291, XIV p. 519, XVI p. 456, XXII p. 78.

1. Phomatospora migrans Rehm, Ascom. Philip. VIII in Leafl. of Philippin. Bot. VIII, 1916, p. 2936. — Perithecia in maculis epidermidis orbicularibus, dealbatis periphaerice migrantibus, 4 cm. latis, demum confluentibus, annulatim gregarie innata, lenticularia, minutissime ostiolata, nigritula senilia denudata, 0,5 mm. lata, membranacea ex cellulis quadratis 20 × 10; ascis ovato-clavatis sessilibus crasse tunicatis, 60-80 × 20-24, 8-sporis, J-; sporis ellipsoideis, 1-cellularibus hyalinis 15-20 × 8-9, 2-3-stichis paraphysibus nullis.

Hab. ad Arengam sacchariferam (Palmae), Los Baños, Ins. Philipp. (S. A. REYES).

2. Phomatospora kriegeriana Rehm, Ann. Mycol. X, 1912, p. 390. — 5908 Peritheciis immersis interdum seriatis, gregariis v. dispersis, globulosis, ostiolo papillulato epidermidem perforantibus, membranacee fuscidule contextis, 0,2 mm. diam. glabris; ascis cylindra-

ceis, apice rotundatis,  $70.75 \times 10.14$ , octosporis, J.; sporis ellipsoideis, utrinque acutatis, unicellularibus, hyalinis,  $14 \times 7$ , monostichis; paraphysibus nullis.

Hab. in caulibus siccis Lysimachiae vulgaris (Primulaceae), prope Königstein a. Elbe, Saxonia (KRIEGER). — Ab coeteris speciebus sporis magnis utrinque acutatis diversa.

3. Phomatospora Rosae Rehm, Ann. Mycol. XI, 1913, p. 397. — Perithecia sub epiderinide in cortice fuscato nidulantia, dispersa, globulosa, poro minutissimo pertusa, epidermium demum protuberantia, perforantia, inde denudata, glabra, 0,2 mm. diam., sicca umbilicata, fusca, non carbonacea. Asci cylindracei, apice rotundati, -100 ≈ 9-10, 8-spori. Sporae ovoideae, 1-cellulares, 1-magniguttatae, hyalinae, 15 ≈ 7, 1-stichae. Paraphyses nullae.

Hab. ad ramulos emortuos R o s a e (Rosaceae), Kulm N. Dakota, America bor. (Brenckle).

- DESMOTASCUS F. L. Stevens, Bot. Gazette 68., 1919, p. 476 (Etym. a desmotes captivus). Mycelium et perithecia nigra, sphaeriacea, ostiolata, breviter rostellata. Asci pseudoparenchymate immersi, octospori. Sporidia subhyalina unilocularia. Differt a Phomatospora pseudoparenchymate interascigero.
- 1. Desmotascus portoricensis F. L. Stevens, Bot. Gazette 68., 1919, p. 5910 476, tab. XXX. Mycelio obscuro ex hyphis variae crassitudinis (4-17 μ) efformato; peritheciis 119-190 μ latis, S5 μ altis, nigris rugoso-sphaeroideis, solitariis v. 2-3 aggregatis, immersis apice papillatis v. breviter rostellatis, ostiolatis; ascis octosporis, oblongis, obtusis apice incrassatis, 50-85 × 17; paraphysibus nullis sed cavitate peritheciorum pseudoparenchymate fulta; sporidiis oblongis subirregularibus, pallide stramineis, 20-31 × 8,5-10.

Hab. in foliis Bromeliae Pinguin (Bromeliaceae), Mayaguez Porto Rico, Amer. Centr.

PHYSALOSPORA Niessl. — Syll. I p. 433, IX p. 591, XI p. 291, XIV p. 520, XVI p. 457, XVII p. 203, XXII p. 80.

1. Physalospora Hymanthophylli Gz. Frag., Fungi Hort. Matrit. 1917, 5911 p. 9. — Peritheciis numerosis immersis, tectis, globosis, non v. vix papillatis, ostiolo erumpentibus, nigris, membranaceis, minutis, 125-175 μ diam.; ascis cylindraceis, 48-56 ≈ 10-12, pedicellatis, apice attenuatis; paraphysibus linearibus, guttulatis; sporidiis irregulariter distichis, subfusoideis v. oblongo-ventricosis, utrinque atte-

nuato-obtusis, intus minute granulosis v. guttulatis, 17-21  $\approx 5$ -6,5, raro usque ad  $22 \approx 7$ .

Hab. in foliis emortuis Hymanthophylli miniati (Amaryllidaceae), in Horto bot. Madrid, Hispaniae (A. CABALLERO).

2. Physalospora Diedickei Jaap, Verh. Bot. Ver. Prov. Brandenb. LV1 5912 (1914) p. 82 (1915). — Peritheciis gregariis dense in greges latos dispositis, saepe totum folium invadentibus, utplurimum epiphyllis, subepidermicis, dein erumpentibus, globosis, breviter ostiolatis, 300-400 μ diam.; ascis late elavatis, ad 95 μ longis, 15 μ crassis, sursum late rotundatis, paraphysatis, facile diffluentibus; sporidiis ellipsoideis vel subovatis, rotundatis, hyalinis, continuis, intus granulosis vel grosse 1-guttulatis, 8-12 × 6-8.

Hab. in foliis siecis Ilicis Aquifolii (Aquifoliaceae), in Schleswig-Holstein, Germania.—A Ph. Ilicis (Schleich.) Sacc. praecipue differt sporidiis minoribus.

3. Physalospora Hoyae H. et P. Sydow, Ann. Mycol, X1, 1913, p. 259.— 5913
Peritheciis amphigenis, plerumque hypophyllis, in partibus foliorum albide decoloratis effusis dense aequaliterque distributis, subinde totam folii superficiem obtegentibus, applanato-globulosis, 150-180 μ diam., atris, poro pertusis, irregulariter parenchymatice fusce contextis, cellulis contextus 9-12 μ diam.; ascis oblongis, subclavatis v. saccatis, apice rotundatis, aparaphysatis (ut videtur), 48-68 × 16-25, octosporis; sporidiis oblongis, utrinque late rotundatis, continuis, hyalinis, 19-25 × 6,5-8, medio subinde leniter contractis.

Hab. in foliis morientibus Hoyae sp. (Asclepiadaceae), Los Baños ins. Philippinensium (C. F. BAKER).

4. Physalospora nitidula Sacc., Notae Myc. XXIII p. 64 (Accad. Ven. 5914 trent. 1917). — Maculis amphigenis, subochraceis, vagis; peritheciis laxe gregariis innatis, epiphyllis, sed utrinque visibilibus, globulosis, atro-nitidulis, duriusculis, 300-350 μ diam. ostiolo impresso; contextu celluloso, parum distincto, castaneo; ascis cylindraceis brevissime stipitatis, apice obtusulis, 75-80 × 9, parce filiformi-paraphysatis, octosporis; sporidiis oblique monostichis, ellipsoideis, utrinque rotundatis, 11-12 × 7-7,5, nubilosis hyalinis.

Hab. in foliis languidis Cordiae Myxae (Borraginaceae), Los Baños, Ins. Philipp.

5. Physalospora caryophyllinicola F. L. Stevens, Trans. Ill. Ac. of Sc., 5913 v. X, 1917, p. 184. — Maculis copiosis; peritheciis hypophyllis in maculis dense aggregatis, nigris, subepidermicis, globosis, 60-110 μ diam., ostiolo 20 μ cr. obscure marginato; aseis cylindraceis 25 × 8,

octosporis; paraphysibus filiformibus, guttulatis, tenuibus; sporidiis ovoideis leniter assymmetricis, guttulatis,  $20 \times 5$ .

Hab. in foliis Drymariae cordatae (Caryophyllaceae), Jayuya, Porto Rico, America Centr.

6. Physalospora andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5916 Buenos Aires XXIII p. 48 (1912).— Maculis effusis, indeterminatis, flavescentibus, amphigenis, 5-20 mm. latis, peritheciis epiphyllis, copiosissimis, discretis, parenchymate innatis, prominulis, nigris, lenticularibus, 100-150 μ diam., siccis collapsis, obsolete papillatoostiolatis, contextu parenchymatico fuligineo; ascis subellipsoideis, apice obtuse rotundatis, basi brevissime crasseque pedicellatis, 55-60 × 15-18, aparaphysatis; sporidiis elliptico-navicularibus, utrinque obtusis, 18-20 × 9-10, saepius grosse 1-2 guttulatis, hyalinis.

Hab, in foliis vivis Solidaginis linearifoliae (Compositae), secus rivulum Potrerillos, prope Mendoza: Argentina. — Species notis nonnullis ad *Phyllachoram* vergens sed a *Ph. Solidaginis* Schw. toto coelo diversa.

7. Physalospora Embeliae II. S. Yates, The Philipp. Journ. of Sc., Bot., 5917 13., 1918, p. 377. — Maculis amphigenis, orbicularibus, 0,6-1,4 cm. diam., peritheciis immersis, epiphyllis, in maculis concentricis dispositis, globulosis, 250-300 μ diam., epidermide elevata tectis et ostiolo papilliformi atro, prominulo praeditis; ascis cylindraceis 100 × 6-8, basi in pedicellum attenuatis, 8 sporis; paraphysibus filiformibus; sporidiis monostichis, ellipsoideis, utrinque late rotundatis, hyalinis, 10 × 5.

Hab. in foliis Embeliae (Diapensiaceae), Basilan, Ins. Philippin. (YATES).

8. Physalospora propinqua Sacc., Philipp. Journ. of Sc. Manila, P. I. 5918 1921, p. 597. — Peritheciis gregariis, saepius seriatis, globulosis, obtuse papillatis, subcutaneo-erumpentibus, prominulis, intus albis, 0,25-0,33 mm. diam., ascis crasse clavatis, breviter stipitatis, crasse tunicatis, S5-95 × 18-20, octosporis, obsolete paraphysatis; sporidis distichis, oblongo-fusoideis, saepe inaequilateris, utrinque obtuse tenuatis, 18-20 × 6, hyalinis.

Hab. in ramis emortuis Ricini communis (Euphorbiaceae), Kwang Tung, Canton, Cina (Reinking).— Affinis Ph. gregariae, sed sporidiis subfusoideis, angustioribus et Ph. reinkingianae sed sporidiis brevioribus diversa.

9. Physalospora Adianthi v. Höhft., Fragm. zur Mykol. 764, in Stzgsb. 5919 Akad. Wiss. Wien CXXI, 1, p. 382 (1912).— Maculis brunneis, ob-

scurius marginatis, variae magnitudinis e foliorum margine procedentibus, saepe usque ad  $^{\circ}/_{4}$  laminam invadentibus, amphigenis, nervis limitatis; peritheciis copiosis, gregarils, utrinque prominulis, ostiolo papillato per epidermidem inferiorem erumpente, atro-brunneis, globoso-depressis, 160  $\mu$  usque latis, 100-120  $\mu$  altis, contextu parenchymatico 12  $\mu$  er., mycelio intercellulari ex hyphis griseoviolaceis 6-8-12  $\mu$  crassis; ascis clavatis, apice rotundatis erasseque tunicatis, sessilibus, 48  $\times$  14-16, paraphysibus copiosis, erassis, articulatis intermixtis; sporidiis 2-3-stichis, oblongis, utrinque rotundatis, medio ventricosis inde obtuse fusiformibus, contentu granuloso, 12-18  $\times$  5-6, utrinque clypeo gelatinoso instructis qua causa usque ad 22  $\mu$  longis.

Hab. in pinnulis Adianthi sp. (Filices), in horto bot. Peradeniya, Ceylon.

10. Physalospora Ephedrae Sydow, Monit. Jard. Bot. Tiflis XXVI (1913) 5920 p. 5.—Peritheciis sparsis, globuloso-conicis, immersis, atris, ostiolo verruciformi tantum erumpentibus, 150-225 μ diam., contextu opaco coriaceo; aseis cylindraceo-clavatis, apice rotundatis, brevissime stipitatis, 110-160 × 17-22, octosporis; sporidiis oblique monostichis, usque distichis, utrinque rotundatis, continuis, hyalinis, intus granuloso-faretis, 20-26 × 10-13.

Hab. in ramis Ephedrae procerae (Gnetaceae), Tiflis, Caucaso (Woronow).

11. Physalospora peribambusina Rehm, Ascom. Philippin. VIII, in 5921 Leaflt. of Philippin. Bot. VIII, 1916, p. 2937. — Perithecia plurima in culmis late dealbatis epidermidis gregarie innata, solitaria interdum seriatim arcte congregata, peridermium elevantia, laciniatim vel lineariter perrumpentia globulosa, minutissime papillulata, nigra, glabra 0,12 mm. lata; ascis clavatis crasse tunicatis, 80-90 × 15, 8-sporis; sporis ellipsoideis, 1-cellularibus, interdum 1-magniguttulatis, hyalinis, 18 × 7-8, distichis; paraphysibus filiformibus; excipulum parenchymaticum, crassum, fuscum.

Hab. ad emortuam Bambusam vulgarem (Graminaceae), Los Baños, Ins. Philipp. (C. F. Baker et S. R. Reyes). — Phys. Bambusae (Rab.) Sacc. imprimis sporis multo minoribus aliena.

12. Physalospora reinkingiana Sacc., Philipp. Journ. of Sc. Manila, 5922 P. I. 1921, p. 596. — Peritheciis globulosis, subcutaneis, saepius gregatim seriatis, 200-250 μ diam., vix papillatis, nigris, initio intus albis, contextu pachydermatico, indistincte celluloso, fuligineo; ascis tereti-clavatis, breviter sensim stipitatis, 115-120 × 12, obso-

lete paraphysatis, 8-sporis; sporidis oblique monostichis v. distichis, fusiformibus, rectis curvulisve, 30-33\*5,5-6, raro brevioribus, intus nubilosis, hyalinis.

Hab. in culmis emortuis Bambusae vulgari,s (Graminaceae), socio Melanconio sphaerospermo, Kwang Tung, Canton, Cina (Reinking). — Imprimis sporidiis fusoideis, longis dignoscenda, et a Phys. Bambusae omnino diversa.

13. Physalospora Dinochloae Rehm, Ascom. Philippin. VIII, in Leaflt. 5923 of Philippin. Bot. VIII, 1916, p. 2937. — Perithecia gregaria innata, peridermium haud decoloratum protuberantia, globulosa minutissime papillulata, nigritula, 100-120 μ lata, glabra, parenchymatice contexta; ascis ovalibus, 45-48 × 25, 8-sporis; sporis oblongo-subclavatis rectis 1-cellularibus, hyalinis, 18-20 × 8, strato mucoso hyalino, 2 μ lato obductis, distichis; paraphyses? nullae.

Hab. in culmis Dinochloae sp. (Graminaceae), Los Baños, Ins. Philipp.

14. Physalospora linearis Sacc., Notae Myc. XXIII p. 64 (Accad. Ven. 5924 trent. 1917). — Peritheciis series longas angustissimas parallelas formantibus, innatis ostioloque minuto erumpentibus, globulosis 100-150 μ diam., intus albis, dein totis nigris; ascis crasse clavatis, saepe flexis, deorsum sensim tenuato-stipitatis, 90-100 × 12-14, crasse tunicatis; paraphysibus irregularibus, guttulatis; sporidiis distichis ellipsoideo-elongatis, 17-19 × 6, utrinque obtusulis, nubilosis, hyalinis.

Hab. in culmis emortuis Zeae Maydis (Graminaceae), Los Baños, Ins. Philipp. (BAKER). — Dispositione lineari mox dignoscitur et tunc a Ph. zeicola est omnino diversa.

15. Physalospora luglandis H. et P. Sydow et Hara in Sydow, Ann. 5925 Mycol. XI, 1913, p. 260. — Peritheciis dense gregariis, peridermio tectis, globosis, brevissime papillatis, 140-170  $\mu$  diam., atris, nucleo albo farctis; ascis clavatis, apice rotundatis, crasse tunicatis, breviter stipitatis, 80-100  $\approx$  16-22, octosporis; sporidiis distichis, ovoideo-oblongis v. oblongo fusoideis, continuis, intus guttulatis, hyalinis, 17-26  $\approx$  7-8.

Hab. in ramis corticatis Juglandis regiae var. sinensis (Juglandaceae), Kawauye mura pr. Mino, Japoniae (K. HARA).

16. Physalospora Barringtoniae Syd., Ann. Mycol. 14., 1916, p. 359.— 5926 Maculis amphigenis, orbicularibus, 0,5-1 cm. diam.; peritheciis in hypophyllo conspicuis, in mesophyllo sitis, in macula aggregatis, sed discretis, sublenticularibus usque depresso-globosis, 170-220 μ diam., parietibus lateralibus et basali parum evolutis pallidis, pariete superiore magis evoluto et obscuriore; ascis cylindraceo-clavatis, paraphysatis, 100-130  $\mu$  longis, 13-18  $\mu$  latis; sporidiis octonis, oblique monostichis usque distichis, fusoideis, utriuque attenuatis continuis, byalinis, 20-24  $\mu$  longis, 8-9  $\mu$  latis.

Hab. in foliis Barringtoniae spec. (Lecythidaceae), prope Rizal Luzon, ins. Philipp. (M. RAMOS).

17. Physalospora Andirae F. L. Stevens, Trans. III. Ac. of Sc. v. X, 5927 1917, p. 184. — Maculis conspicuis amphigenis, colore coriario donatis, forma irregularibus subdefinite marginatis; peritheciis subepidermicis demum erumpentibus, colore coriariis, areola circulari 0,5 mm. diam. limitatis; aseis tenuiter tunicatis, octosporis, 54. 68 × 7, paraphysibus numerosis filiformibus obvallatis; sporis monostichis v. inordinatis, unilocularibus, ovoideis, hyalinis.

Hab. in foliis Andirae jamaicensis (Leguminosae), pluribus locis in Porto Rico, America.

18. Physalospora Astragali (Lasch) Sacc.—Syll. I p. 437.— Var. cau- 5928 licola Sacc., Notae Mycol. XXII (R. Acc. Pad. 1917, p. 164).— Peritheciis caulicolis et macula epidermica atra longe producta tectis; ascis tereti-clavatis, 80-100 × 14-15; sporidiis octonis oblique monostichis, ellipsoideis, utrinque rotundatis, 16-17 × 7-8, e hyalino dilutissime flaveolis, intus nubilosis, circulo hyalino initio obductis.

Hab. in caulibus subvivis Astragali pectinati (Leguminosae), pr. Minot, Dakota, Amer. bor. (Leg. O. A. STEVENS., comm. Brenckle).

19. Physalospora xanthocephala Syd. et Butl., Ann. Mycol. IX, 1911, 5929 p. 408.— Peritheciis dense aggregatis, subinde quasi caespitosis v. subconfluentibus, peridermio primitus tectis, globulosis, 200-300 μ diam., atris, globoso-papillatis, ostiolo dilutiore obscure flavido erumpente; ascis cylindraceo-clavatis, crasse tunicatis, apice rotundatis, 80-120 × 17-22, p. sp. 60-95 × 17-22, octosporis; paraphysibus filiformibus, multiseptatis; sporidiis distichis, ellipsoideo-oblongis v. fusoideo-oblongis, medio inflatis, utrinque angustioribus, sed apicibus obtuse rotundatis, continuis, hyalinis, ca. 22-29 × 7,5-10.

Hab. in ramis corticatis C a j a n i i n d i c i (Leguminosae), Pusa, Indiae or (R. Sen).— Phys. gregariae Sacc. proxima sed sporidiis latioribus et ostiolo peritheciali flavidulo longiore diversa.

20. Physalospora guignardioides Sacc., Notae Mycol. XX, Nuovo Giorn. 5930 bot. it. 23., 1916, p. 201. — Peritheciis laxiuscule gregariis, subcutaneo-erumpentibus, globulosis, v. subdepressis non v. vix papil-

latis, 120  $\mu$  diam. nigris, poro rotundo 12-15  $\mu$  diam. pertusis, ecentextu celluloso fusco-fuligineo; ascis cylindraceis, apice rotundatis, breviter stipitatis, 85-95  $\times$  8-10, octosporis; paraphysibus pancis evanidis; sporidiis oblique monostichis ellipsoideis, utrinque acutulis, 11-12  $\times$  4-5, hyalinis, farctis.

- Hab. in caulibus emortuis C an avaliae gladiatae (Leguminosae), Los Baños, Ins. Philipp. — Ob partium parvitatem ad Guignardiam nutat. Forte est Physal. Phomopsi (C. et B.) Sacc. affinis.

21. Physalospora Caraganae Woronichin, Bull. Jard. imp. Bot. St. 5931 Oétersb. XI (1911) p. 12.— Stromatibus amphigenis, griseo-roseis; peritheciis gregariis, globosis vel oblongis, 290-420 × 240-325, stromate immersis, vix apice prominentibus, contextu parenchymatico, roseo-ochraceo, ad apicem perithecii brunneo; ascis cylindraceo-fusoideis, octosporis, 87-105 × 14-16, paraphysibus filiformibus hyalinis obvallatis; sporidiis ellipsoideis, hyalinis, monostichis, 12-14 × 7-8.

Hab. in foliis languidis C a r a g a n a e f r u t i c i s (Leguminosae), in Rossia, distr. Buguruslan, gub. Samara (ISPOLATOV).—Satis affinis P. Astragali (Lasch) Sacc., a qua tamen differt, practer matricem alienam, magnitudine peritheciorum et forma stromatis.

22. Physalospora Machaerii P. Henn., Hedw. v. 48. (1908) p. 9.— Maculis sparse effusis, fuscidulis; peritheciis laxe gregariis, subhemisphaericis, atro-nitentibus, 130 μ circ. diam.; aseis cylindraceo-clavatis, obtusis, octosporis, paraphysatis, 35-40 × 5-6; sporidiis late ellipsoideis vel ovoideis, intus granulosis, hyalinis, 8-12 × 6-7.

Hab. in foliis Machaerii lanati (Leguminosae), Serra da Cantareira, S. Paulo, Brasilia.

23. Physalospora Cladoniae (Stein) Vouaux, Bull. Soc. Mycol. Fr. 1913, 5933 p. 83, Thrombium Cladoniae Stein, Nachtr. z. Fl. Schl. IV p. 148. — Peritheciis immersis, dein emergentibus et subsuperficialibus, depresse ostiolatis, sphaeroideis, 100 μ diam.; ascis cylindraceis; paraphysibus capillaribus; sporidiis ovoideo-ellipsoideis, 9-12 × 4-6.

Hab. in thallo Cladoniae neglectae (Lichenes), Silesia, Europa media (STEIN). — Ph. Xanthoriae proxima sed peritheciis multo minoribus demumque subsuperficialibus diversa.

24. Physalospora Jonaspidis (Stein) Vouaux, Bull. Soc. Mycol. 1913 5934 p. 83, Thrombium Jonaspidis Stein, Nachtr. z. Fl. Schl. IV p. 148.— Peritheciis immersis, apice depressis, vix 80 μ diam.; sporidiis ovoideis, 9-11 × 4-7.

Hab. in thallo J o n a s p i d i s c h r y s o p h a n a e (Lichenes), Silesia, Europa media (STEIN).—A Ph. Cladoniae vix distincta.

25. Physalospora Galactinae Vouaux, Bull. Soc. Myeol. 1913, p. 81.— 5935
Peritheciis sparsis, parum numerosis, ½ v. ½ circa emergentibus, nigris, poro umbilicatis, subsphaeroideis, 180-285 μ diam.; contextu crasso, obscure brunneo, pseudoparenchymatico e cellulis polyedricis irregularibus 5-7 μ cr. efformato; ascis clavatis, crasse breviterque pedicellatis, apice praecipue crasse tunicatis, 4-8 sporis, 64-81 × 14-17; paraphysibus numerosis, filiformibus, irregularibus, parce septatis, ramosissimis et anastomosantibus, ascos superantibus, 1-1,5 μ crassis; sporidiis distichis ellipsoideo-oblongis, utvinque late rotundatis, hyalinis, continuis, crasse tunicatis, saepe 1-3 grosse guttulatis, 14-18 × 6-8.

Hab. in thallo Lecanorae galactinae (Lichenes), Dunkerque, (BOULY DE LESDAIN), et Béziers Her., Gallia (A. DE CROZALS).

26. Physalospora atractina Syd., Ann. Mycol. 14., 1916, p. 79. — Pe- 5936 ritheciis hypophyllis, pluribus in maculis minutis rotundatis vel irregularibus saepe angulatis 1-4 mm. latis griseo-brunneis insidentibus, immersis, vertice tantum per epidermidem prorumpentibus, atris, 150-200 μ diam., irregulariter globosis, contextu indistincte parenchymatico; ascis cylindraceis stipitatis, 70-85 × 9-11, paraphysibus mucosis; sporidiis octonis, fusoideis, utrinque attenuatis, continuis, hyalinis, 18-22 × 4-4,5.

Hab. in foliis Fici sp. (Moraceae), Seringal S. Francisco, Rio Acre, Brasiliae (E. Ule).

27. Physalospora ficina Syd., Ann. Mycol. 15., 1917, p. 207. — Ma-5937 culae distinctae, amphigenae, orbiculares, 3-5 mm. diam., fusco-purpureae elevateque marginatae, in epiphyllo griseae, in hypophyllo atro-brunneae; perithecia hypophyllo dense aggregata, subepidermalia, immersa, tecta, applanato-globosa, 170-200 μ diam., pariete ca. 10 μ crasso minute parenchymatice contexto, ostiolo rotundo epidermidem perforantia; asci clavati; subsessiles vel brevissime stipitati, copiose paraphysati, 50-60 × 17-20, octospori; sporae distichae vel oblique monostichae, ellipsoideae vel oblongo-ellipsoideae, continuae, utrinque obtusae vel subattenuatae, 15 17 × 7-10.

Hab. in foliis F i c i sp. (fol. coriaceis) (Moraceae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

28. Physalospora minuta Miyake, Fung. jap. moric. 1916, t. 314 tab. 5938

II f. 1-2-3 (japonice) et in Mycologia, 1918, p. 285. — Peritheciis

subcutaneo erumpentibus, ellipsoideo-globoideis, 150-200 lat., 125  $\mu$  alt.; contextu parenchymatico, atro; ostiolis 45-50  $\mu$  long., 40  $\mu$  lat.; ascis tereti-clavatis, crasse tunicatis 60-70  $\times$  13-18, copiose paraphysatis, octosporis; sporidiis subdistichis, fusoideis v. ellipsoideis, obtusis, minute granulosis, 18-22  $\times$  8-9, hyalinis.

Hab. in ramis Mori albae (Moraceae), in Japonia (HARA, MIYAKE).

29. Physalospora pelladensis P. Henn., Hedw. vol. 48. (1908) p. 9.— 5939 Maculis rotundatis, rufo-fuscidulis; peritheciis aggregatis, rotundatim dispositis, hemisphaericis, atro-nitentibus, 150 μ circ. diam.; ascis subovoideis vel subclavatis, octosporis, paraphysatis, 50-70 × 18-22; sporidiis subdistichis vel conglobatis, ellipsoideis vel ovoideis, hyalinis, continuis, 10-15 × 7-8.

Hab. in foliis Melastomataceae, Morro Pellado, S. Paulo, Brasilia.

30. Physalospora horgiana Sace., Ann. Mycol. XI, 1913, p. 561, Nuovo 5940 Giorn. bot. it. N. S. v. XXI, 1914, p. 116.— Peritheciis gregariis subcutaneo-erumpentibus globoso-hemisphaericis, 225 μ diam., vix papillatis, poro pertusis; contextu atro-fuligineo denso; ascis tereti-oblongis, apice tunica incrassata rotundatis, brevissime stipitatis, 68·70 × 16, octosporis, paraphysibus crassiusculis irregularibus obvallatis; sporidiis breviter fusoideis, distichis, utrinque acutatis, 16-18 × 6, hyalinis, intus nubilosis.

Hab. in ramis emortuis Jasmini heterophylli (Oleaceae), S. Antonio (Insula Melita) (Doct. Borg).—Pluribus speciebus affinis et praesertim Phys. minutulae, sed matrice aliisque notis videtur distinguenda.—Rev. Pater Theissen (Ann. Mycol. 14., 1916, p. 418), inventa fortuiter in meo specimine Pleospora vulgari, non dubitavit meam Physalosp. borgianam (contextu atro-fuligineo denso donatam!), quam invenire non scivit, esse statum immaturum Pleosporae!. Ulterius cautius procedat nam Pleospora borgiana Theiss. est omnino superflua (P. A. Sacc. in ms.).

31. Physalospora Arecae v. Höhn., Fragm. zur Mykol. 765, in Stzgsb. 5941 Akad. Wiss. Wien CXXI, 1, p. 383 (1912).— Maculis amphigenis, copiosis; irregulariter rotundatis vel oblongis, 1-2 cm. diam., late brunneo-marginatis, centro pallescentibus; peritheciis epiphyllis, copiosis, plerumque in series breves ordinatis, subepidermicis, ostiolo applanato minuto non erumpente, atro-brunneis, 160-200 μ diam., excipulo submembranaceo 12 μ crasso; ascis late clavatis, sessilibus, sursum rotundatis, 52-70 × 14-20, paraphysibus spu

riis obvallatis; sporidiis distichis, hyalinis, oblongis vel subclavatis, utrinque rotundatis, intus granulosis, 16-18 × 6-8.

Hab. in foliis vivis Arecae? Catechu (Palmae), Buitenzorg, Java. — Adsunt pycnidia (Phyllosticta Arecae v. Höhn.) peritheciis similia, sporulas ovato-globosas 8-12 μ crassas, intus granulosas gerentibus.

32. Physalospora rhacheophila Sacc., Notae Myc. XXIII p. 64 (Accad. 594) Ven. trent. 1917, p. 64).— Peritheciis gregariis vel hinc inde aggregatis, subcutaneis, vix erumpentibus, atris, 300-320 μ diam., intus albis, poro pertusis; contextu grosse parenchymatico atro-fuligineo; ascis tereti-clavatis, deorsum breviter stipitato-tenuatis, apice rotundatis, 55-60 × 8-9, octosporis; paraphysibus articulatis, diffluentibus; sporidiis distichis oblongo-subrhombeis, utrinque acutulis, 17-19 × 6, nubilosis, hyalinis.

Hab. ad rhachides emortuas Arengae mindorensis (Palmae), Los Baños, Ins. Philipp. (BAKER).

33. Physalospora Astrocaryi P. Henn., Hedw., vol. 48. (1908) p. 107.— 5943

Maculis pallidis effusis; peritheciis sub epidermide nidulantibus, gregariis, membranaceis, globulosis, atris, 200-220 μ diam., ostiolis vix prominulis; ascis clavatis, apice rotundatis, octosporis, 60-90 × 20-25; sporidiis subdistichis, fusoideis, rectis vel curvulis, tunicatis, obtusis, pluriguttulatis, hyalinis, 20-30 × 10-13.

Hab. in foliis Astrocary i rostrati (Palmae), horto botan. Goeldi Parà, Brasilia (BAKER).

34. Physalospora Calami Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 5944 p. 407. — Maculis distinctissimis, amphigenis, oblongis, 0,5-2 cm. long., <sup>1</sup>/<sub>3</sub> - <sup>1</sup>/<sub>2</sub> cm. latis, centro tandem albescentibus, zona lata brunnea cinctis; peritheciis epiphyllis sparse v. laxe aggregatis, primo ex toto immersis, dein vertice prominulis, subglobosis, membrana ceis, atris, poro pertusis, 120-200 μ diam.; ascis clavatis, apice rotundatis, 40-60 × 10-12, octosporis; sporidiis distichis, oblongis, utrinque rotundatis v. uno fine attenuatis, continuis, hyalinis, intus nubilosis, 11-17 × 5-7.

Hab. in foliis Calami tenuis (Palmae), Chittagong, Indiae or. (R. SEN).

35. Physalospora transversalis Syd. in Syd. et Butl., Ann. Mycol. IX, 5945
1911, p. 407. — Maculis distinctissimis, amphigenis, haud in folii
longitudinem directis sed per folii nervos transgredientibus, plerumque ellipticis, 2-5 mm. long., sordide albidis, linea elevata rufobrunnea amoene cinctis; peritheciis epiphyllis, saepe etiam in utra-

que foliorum pagina conspicuis, immersis, globulosis, sparsis v. laxe aggregatis, atris, 80-140 µ diam., poro pertusis; ascis cylindraceis, breviter stipitatis, 44.55 > 6.7, octosporis; sporidiis oblique distichis, cylindraceis, uno fine attenuatis, leniter curvulis, continuis, hyalinis,  $14-17 \approx 3$ .

Hab. in foliis vivis Cocoes nuciferae (Palmae), Bilin, Burma, Indiae or. (E. J. BUTLER).

36. Physalospora Cydoniae Arnaud, Annal. Ecole Nat. Agr. Montpellier, 5946 ser. 2, XII p. 9, fig. 2 (1912). — Peritheciis nigris, globosis, 350 µ lat., vertice obtusis, nucleo albo; ascis clavatis, S-sporis, 100-120 ≥ 15-20, pseudoparaphysatis; sporidiis primo fusoideis dein elliptico-rhomboideis, inaequilateris,  $25 \times 11$ .

Hab. in cortice Cydoniae vulgaris (Rosaceae), Montpellier, Gallia merid. - Status pyenidicus verisimiliter Sphaeropsis Pseudodiplodia.

37. Physalospora coffacicola Spegaz., Fungi Costarie. nonn., in Bot. 5947 Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 192, cum icon. - Maculae vagae cinerascentes parum manifestae; perithecia cortice omnino infossa, ostiolo subcarbonaceo nigro per epidermidem vix protrudente delata, globoso-depressa, 100-150 µ diam., atra, membranacea; asci obclavati, 50-60 \* 14-15, brevissime noduloseque pedicellati, aparaphysati, 8-spori; sporae distichae, fusoideo-lineares, leniter inaequilaterales, hyalinae laeves,  $40-42 \times 6-7$ .

Hab. in ramulis fructiferis vivis C o f f a e a e sp. (Rubiaceae), in agris prope Tuis Costarica, America trop.

38. Physalospora solanicola P. Henn., Hedw. vol. 48. (1908) p. 9. - Ma- 5948 culis rotundatis, pallido-exaridis; peritheciis laxe gregariis, erumpenti-superficialibus, hemisphaericis, atro-nitentibus, 140 µ circ. diam.; aseis clavatis, obtusis, octosporis, 55-60 \* 18-20; sporidiis subdistichis, oblongis vel ellipsoideis, obtusis, intus granulosis,  $13.17 \times 7.9$ .

Hab. in foliis Solani sp. (Solanaceae), S. Paulo, Capital, Brasilia.

39. Physalospora affinis Sacc., Notae Mycol. XX, Nuovo Giorn. bot. 5949 it., v. 23., 1916, p. 200. - Peritheciis densissime gregariis, innatoerumpentibus, globosis v. globoso-conoideis, opace nigris, 90-110 µ diam., ostiolo vix papillato 30 \mu diam.; contextu indistincte celluloso atro-fuligineo; ascis clavatis breviter sensim stipitatis, apice subtruncatis, crasse tunicatis, 70-85 > 20-21, octosporis; paraphysibus obsoletis subgelatinosis; sporidiis distichis, ovoideis, utrinque

imprimis basi acutulis, 17-19 × 7,5-8, intus nubilosis, hyalinis.

Hab. in areis atratis fructuum Theobromae Cacao (Sterculiaceae), Los Baños, Ins. Philipp. - Videretur quasi forma minor, discreta Botryosphaeriae minusculae Sacc.

40. Physalospora Theobromae Turconi, Atti Ist. bot. Pavia XVII (1917) 5950 p. 6 (extr.) tab. I f. 1-4. - Maculis plerumque marginalibus, irregularibus, amplis, magnam folii partem obtegentibus, rarius internis, rotundis v. oblongis, 1-3 cm. diam., supra pallide avellaneis v. griseis, rubro-brunneo-marginatis, infra pallide castaneis, margine obscuriore; peritheciis epiphyllis v. amphigenis, sparsis v. laxe gregariis globoso v. ovoideo-globosis, nigris, immersis, ostiolo pallidiore papillato conoideo erumpentibus, 100-150 µ diam.; ascis clavatis v. tereti-clavatis, apice obtuse rotundatis, inferne attenuatis ac breviter stipitatis, 40-60 × 10-14, paraphysibus filiformibus, asco aequilongis v. paullo longioribus, tenuissimis, evanidis, obvallatis, 8-sporis; sporidiis oblique monostichis v. irregulariter distichis, oblongo-ellipsoideis, granulosis, hyalinis, 12-16 × 4-6.

Hab. in foliis Theobromae Cacao (Sterculiaceae), in calidariis Horti botanici Papiensis, Ital. bor., sociis Stachylidio Theobromae et Helmithosporio Theobromae.

41. Physalospora clypeata Theiss., Broteria, Bot., v. XII, 1914, fasc. 5951 I p. 27, fig. 6, a. - Perithecia epiphylla dense sparsa, solitaria v. plura in maculis subrotundis aggregata, atra, carbonacea, lenticularia, ostiolo minuto, 340-420 µ alta, 200-270 µ lata, strato stromatico superiore latius extenso usque 800 \mu, lateraliter tenuiore; asci cylindraceo-subventricosi, profuse paraphysati, 75-90 \* 18-20, octospori; sporidia continua, hyalina, elliptica, utrinque rotundata, 1-2-sticha,  $16-20 \approx 8$ .

Hab. in foliis Tiliaceae, Sao Leopoldo, Brasiliae (J. Rick). 5952 42. Physalospora bullata H. et P. Sydow, Ann. Mycol. XII, 1914, p. 554. — Maculis amphigenis, sparsis, orbicularibus, 0,6-1 cm. diam., atro-fuscis, leniter bullatis, distinctissimis; peritheciis omnino immersis, epiphyllis, in maculis irregulariter dispositis, subinde aggregatis, globulosis, 140-200 µ diam., epidermide bullatim elevata tectis et ostiolo papilliformi atro tantum prominulis; ascis cylindraceis, 120-150 \* 10-11, basi in pedicellum attenuatis, 8-sporis, indistincte paraphysatis; sporidiis recte monostichis, ellipsoideis v. oblongo-ellipsoideis, utrinque late rotundatis, continuis, hyalinis,  $12-15 \approx 6.5-7.5$ .

Hab. in foliis Tetrastigmatis sp. (Vitaceae), Mt. Ma-

quiling prov. Laguna Luzon, Ins. Philippin. (P. W. GRAFF).

43. Physalospora euganea Sacc.—Syll. I p. 436.— Var. viridarii Sacc., 5953 Nuovo Giorn. bot. it. N.S. v. XXII, 1915, p. 34. — Aseis 110-125 × 14-16; sporidiis ellipsoideo-subrhombeis, 19-22 × 9-9,5, 1-2-guttatis; peritheciis 170-190 μ diam., ostiolo rutundo 35 μ diam., contextu parenchymatico, fuligineo.

Hab. in caulibus et petiolis emortuis Antholyzae cultae (Iridaceae), Boschetto Ins. Melita, et Monsterae de liciosae (Araceae), C. Attard, Ins. Melita.

44. Physalospora immersa Massee, Bull. Bot. Gard. Kew 1913, p. 104.— 5954
Peritheciis sparsis, immersis, hyalinis, 300 μ circ. diam., ostiolo vix
exserto donatis, globosis, glabris, subcarbonaceo-membranaceis, contextu parenchymatico subindistincto; ascis fusoideis, sursum acuminatis, deorsum modice attenuato stipitatis, octosporis; sporidiis
plus minusve distichis, ellipsoideis, continuis, hyalinis, 6 × 4.

Hab. in fimo animalium in horto botan. Singapore (Burkill).—
P. disseminatae affinis, sporidiis brevioribus et ascis clavatis distincta.

- HYPOSTEGIUM Theiss., Verh. zool. bot. Ges. Wien Bd. 66., 1916, p. 384. (Etym. hypo subtus et stege tectum).— Differt praecipue a Physalospora peritheciis omnino sub epidermide nidulantibus; a Massalongiella paraphysibus praesentibus. Typ. gen.:
- 1. Hypostegium Phormii (Schr.) Theiss. l. c., Physalospora Phormii Sch- 5955 roet., Syll. XI p. 292.
- PYRENIELLA Theiss., Verh. zool. bot. Ges. Wien Bd., 66., 1916, p. 371, tab. fig. 7. Perithecia immersa apice tantum epidermidem vix elevantia, stromate destituta, hyphis tantum in folio circumdata, contextu sclerotiaceo. Asci aparaphysati singuli in parenchymate interno efformati, demum dense unistratosi, octospori. Sporidia unilocularia, hyalina (an semper?). Typ. gen.:
- Pyreniella Festucae (Lib.) Theiss., 1. c., Sphaeria Festucae Lib., Syll. 5956
   I. p. 434 (Physalospora).

**DITOPELLA** De Not. — Syll. I p. 450, IX p. 602, XIV p. 523.

Ditopella kajiana Hara, Journ. Shiznokanken Agr. soc. n. 269, p. 5957
 63, cum icon. — Peritheciis sparsis, lenticularibus v. subsphaeroideis, rugosis, 80-150 μ diam.; ascis clavatis, 12-sporis, 40-50 × 7-8; sporis fusoideis, continuis, hyalinis, guttulatis, 8-12 × 2-3,5.

Hab. in Oryza sativa (Graminaceae), Prov. Totomi, Kami, Japonia (K. HARA). — Verisimiliter sec. Auct. a fusispora vix diversa.

- STEVENSIELLA Trott. n. nov. Syn. Trabutiella F. L. Stevens, Bot. Gazette 70., 1920, p. 401, nec Theiss. et Syd. 1914 (cnfr. p. 559).— A Trabutia (cnfr. p. 554) ascis 16-sporis, a Ditopella forma elypei diversum genus.
- 1. Stevensiella Cordiae (F. L. Stevens) Trott., Trabutiella Cordiae Stev. 5958 l. c. fig. 4. Maculis juventute pallidis demum definitis circularibus 5-10 mm. diam.; peritheciis in maculis circinnatim concentrice dispositis; clypeo nigro semper epiphyllo, 280  $\mu$  circ. diam. v. oblongo et tunc  $240 \times 500$ ; ostiolo  $45\text{-}75~\mu$  diam.; peritheciis in mesophyllo nidulantibus  $260\text{-}360~\mu$  diam. infra non visibilibus; ascis 16-sporis, tenuiter tunicatis,  $85 \times 17$ ; sporidiis oblongis utrinque acutis, continuis, hyalinis,  $20 \times 3,5$ .

Hab. in foliis Cordiae collococcae (Borraginaceae), Añasco, Mayaguez, Patillo Springs, Jayuda, Hormigueros, in Porto Rico, Amer. Centr.

- WALLROTHIELLA Sacc. Syll. I p. 455, IX p. 605, XI p. 294, XIV p. 524, XVI p. 465, XVII p. 587, XXII p. 90.
- 1. Wallrothiella subiculosa v. Höhn., Fragm. zur Mykol. 763, in Stzgsb. 5959
  Akad. Wiss. Wien CXXI p. 381 (1912). Peritheciis superficialibus, paucis vel copiosis, dense adproximatis subiculo ex hyphis brunneis septatis 40-70 × 3-4 crassis insidentibus, globosis, coriaceis, demum paullo collapsis, 126-160 μ latis, superne calvis, basi pilis copiosis, 20-40 × 3-4, septatis, brunneolis, apice pallidioribus obtusisque vestitis, ostiolo circulari minuto praeditis; hyphis subiculi saepe conidia ellipsoidea, continua, brunneola, 6 × 3 gerentibus; ascis numerosis, irregulariter clavatis, sessilibus, 6-8-sporis, paraphysibus copiosis filiformibus, ascos subaequantibus, cito diffluentibus intermixtis; sporidiis subdistichis, hyalinis, oblongo-ellipsoideis, utrinque rotundatis, levibus vel tenuissime asperatis, 6-9 × 3-3,5, plasmate interdum bipartito.

Hab. in culmis emortuis Bambusae (Graminaceae), Buitenzorg, Java. — Specimina in Rehm, Ascomyc. n.º 1965, sub Guignardiella.

TRICHOSPHAERIA Fuck. — Syll. I p. 452, IX p. 602, XI p. 293, XIV p. 523, XVI p. 463, XVII p. 588, XXII p. 91.

1. Trichosphaeria breviseta Dearn., Mycologia, 1916, p. 99.— Peritheciis nigris, confertissimis, stratum continuum quasi formantibus, in quoque mm. 3-4, globoso-conoideis inferne setulosis; setulis 15-20 μ long. medietatem inf. perithecii occupantibus; ascis linearibus, 50-75 μ long.; paraphysibus asco longioribus; sporidiis uniseriatis, utrinque guttatis, hyalinis, 6-7 × 3-3,5.

Hab. in ligno putri Coniferarum, Victoria, Vancouver (J. MACOUN).

2. Trichosphaeria angularis W. Kirschst., Krypt. Fl. Brandenb. VII, 5961 p. 203 (1911). — Peritheciis sparsis, superficialibus, sphaericis, in ostiolum breve conoideum sensim tenuatis, 200-250 μ diam., contextu atro, membranaceo-coriaceo, levi, regulariter parenchymatico; ascis cylindraceis, sursum incrassatis, longiuscule pedicellatis, octosporis, 105-110 × 6-8, p. sp. 60-90 μ longa, paraphysibus tenuibus ramosis obvallatis; sporidiis oblique monostichis vel irregulariter distichis, ellipsoideo-fusoideis, utrinque plus minusve attenuatis, inaequilateris, saepe subtrigonis, continuis viridulo-hyalinis, intus granulosis, 10-14 × 4-6.

Hab. in ramis decorticatis putrescentibus Quercus (Cupuliferae), Rathenow, Germania.

3. Trichosphaeria regulinoides Sacc. — Syll. I, 454 — var. Arengae 5962 Rehm, Ascomyc. Philipp. I, in Philipp. Journ. of Sci. VIII (1913) p. 184. — Peritheciis gregariis, in maculis fusco-nigritulis oblongis, usque ad 2 cm. long. et lat. sessilibus globulosis, nigris, glabris, siccis apice umbilicatis, poro pertusis, parenchymatice fusce contextis, 150  $\mu$  ca. latis, ad basim hyphis ramosis, subfuscis, septatis, 3-4  $\mu$  cr. mycelium formantibus obsessis; ascis clavatis, teneris, aparaphysatis, octosporis,  $50 \times 7$ ; sporidiis cylindraceis, rectis, 1-cellularibus, utrinque 1-guttulatis, hyalinis,  $5-8 \times 2-2.5$ , superne 2-dein 1-stichis.

Hab. in petiolis emortuis Arengae (Palmae), Luzon, prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — An species propria?

4. Trichosphaeria pilosa (Pers.) Fuck., Sacc. Syll. I p. 452.— var. Saxi-5963 fragae Noelli, Nuovo Giorn. bot. it. N. S. v. XIX, 1912, p. 402, fig.
2. — A typo recedit peritheciis foliicolis nec lignicolis, paraphysibus nullis sporidiis majoribus et longioribus 19 × 9.

Hab. in foliis Saxifragae muscoides (Saxifragaceae), « Colle dei Tre Signori » Alpes Marittimae, Italiae bor.

5. Trichosphaeria macularis Syd. et Butl., Ann. Mycol. IX, 1911, p. 5964

402. — Peritheciis hypophyllis, maculis distinctissimis definitis orbicularibus brunneis dein expallescentibus 4-6 mm, latis insidentibus, sparsis in quaque macula, minutis, globosis, 150-200  $\mu$  diam., superficialibus, atris, ostiolo minuto, tenuiter carbonaceis, pilis fuscis usque 130  $\mu$  long. et 5-7  $\mu$  cr. septatis flexuosis cinctis; ascis cylindraceis, sessilibus, aparaphysatis, 32-50  $\times$  7-10, octosporis; sporidiis distichis v. submonostichis, oblongo-ellipsoideis v. fusoideis, continuis, hyalinis, 12,5-15  $\times$  3-5.

Hab. in foliis vivis indeterminatis, Pulliyanur Travancore, Indiae or. (E. J. BUTLER).

6. Trichosphaeria crassipila Grove, Journ. of Bot. L (1912) p. 48. — 5965 Tenuissime in subiculo atro effusa; peritheciis globosis, astomis, atris v. griseo-atris, pilis brevibus obductis; pilis atro-viridulis, scabriasculis, semipellucidis, 250-300 μ longis, basi 20 μ cr., apice attenuatis; ascis cylindraceis, 100-121 × 11. paraphysibus copiosis linearibus obvallatis; sporidiis oblique monostichis, ovato-oblongis, utrinque obtusis, continuis, eguttulatis, subgranulosis, 10-11 × 6, achrois.

Hab. in ligno putri, Studley Castle in Britannia.

- Trichosphaeria nitida W. Kirschst., Krypt. Fl. Brandenb. VII p. 201 5966 (1911). Ita vocanda Melanopsamma nitida Kirchst. Syll XXII p. 163.
- Trichosphaeria herpotrichioides W. Kirschst., Krypt. Fl. Brand. VII 5967
   p. 203 (1911). Ita vocanda Melanopsamma herpotr. Kirschst. —
   Syll. XXII p. 163.

## TRICHOSPHAERELLA Bomm., Rouss., Sacc. - Syll. IX p. 604.

1. Trichosphaerella similis Bres., Champ. Congo Belge, Bull. Jard. Bot. 5968 Bruxelles IV, 1 (1913) p. 7. — Peritheciis carbonaceis, obovatis, apice glabris, deorsum tomentosis, pseudostromate pannoso, umbrino-fusco nidulantibus; ascis oblongis, sessilibus, polysporis, 33-40 × 10-15; sporidiis hyalinis, curvatis, biguttatis, utrinque vel rarius uno latere tantum caudatis, cauda 6-9 μ longa; pseudostromate ex hyphis fuscis, haud aculeatis, septatis, 4-6 μ crassis conflato.

Hab. ad corticem arborum, Leopoldville, Congo (H. VANDERYST).— Habitu externo *Trichosphaeriae acanthostromati* similis.

\*) **BOTRYOSPHAERIA** Ces. et De Not.— Syll. I p. 456, IX p. 605, XI p. 295, XIV p. 524, XVI p. 467, XVII p. 590, XXII p. 93.

<sup>\*)</sup> Cfr. Theissen, in Ann. Mycol. 14., 1916, p. 297.

1. Botryosphaeria berengeriana De N.— Sace. Syll. I p. 457 — var. Wei- 5869 geliae Rehm, Ascom, exsice, fase, 54 n. 2096, Ann. Mycol. XII, 1914, p. 168. -- Stromatibus linearibus -2 cm. longis, confluentibus; ascis clavatis, apice rotundatis et valde incrassatis, 90-100 × 15-18, octosperis; speris clavatis, unicellularibus, hyalinis, 20-22 × 9-10, distichis.

Hab. in cortice Weigeliae (Caprifoliaceae), Batum Osurgety, Caucasus (G. Newodowski) .- Sec. Cl. Rehm an potius propria species?

2. Botryosphaeria? Nephrodii v. Höhn., Fragm. zur Mykol. 768, in 5970 Stzgsb. Akad. Wiss. Wien CXXI, 1, p. 385 (1912). -- Maculis hypophyllis 0,5 mm. longis, 1-3 mm. latis, nervis limitatis, obscure brunneis; stromatibus paucis, subepidermicis, brunneis, parenchymaticis; loculis excipulo proprio carentibus, superne strato stromatico 40 µ crasso tectis, e basi applanata conoideis, 170-230 µ latis, 120-160 \( \mu\) altis, minute ostiolatis; ascis sessilibus, fusoideoclavatis, 56-60 \* 12-13, paraphysibus spuriis filiformibus obvallatis; sporidiis distichis, oblongo-ellipsoideis, utrinque rotundatis, continuis, hyalinis,  $16-20 \approx 5-6$ .

Hab. in frondibus Nephrodii pennigeri (Filices) in horto botan. Buitenzorg, Java. - Species anomala, inter Botryosphaeria et Physalospora anceps et ad Phyllachoram quasi vergens.

3. Botryosphaeria oblongula Sacc., Notae Myc. XXIII p. 64 (Acc. Ven. 5971 trent. 1917, p. 65.—Stromatibus densiuscule, late gregariis, innatoprominulis, et vix erumpentibus, longitudinaliter ovato-oblongis, nigricantibus, circ. 1 mm. long., 0,5 mm. lat.; peritheciis irregulariter globosis, minutis, subastomis, 80-90 µ diam., basi stromate immersis; contextu obsolete celluloso, fuligineo; ascis cylindraceis, deorsum breviter tenuato - (saepe incurvo) - stipitatis, 45.60 > 7-7,5, apice rotundatis, octosporis; paraphysibus non observatis (jam resorptis?); sporidiis oblique monostichis, vel partim distichis, oblongulis, utrinque rotundatis, saepius inaequilateris, nubilosoguttulatis,  $15-16.5 \times 4-5$ , e hyalino dilutissime flavidulis.

Hab. in culmis emortuis Bambusae vulgaris (Graminaceae), Los Baños, Ins. Philipp. (BAKER). — Stromatibus oblongulis, peritheciis non prominentibus et ascis cylindraceis a typo generis parum desciscit.

4. Botryosphaeria senegalensis Speg., Anal. Mus. Nac. Buenos Aires 5972 XXVI p. 122 (1914). - Stromatibus matrice tota sordide infuscata insidentibus, innatis, atris, hysteriatim erumpentibus, linearibus,

utrinque acutis, 1-2,5 × 0,5-0,7 mm., parum prominulis, medio granulosis, apices versus levibus, glabris; peritheciis monostichis, subglobosis, 150-200 u diam., substantia stromatica nigra parcissima conjunctis, non vel vix papillatis, membranaceo-coriacellis, contextu indistincto atro-olivaceo; aseis e cylindraceo clavulatis, breviter crasseque pedicellatis, 90-100 × 20, aparaphysatis vel pseudoparaphysibus paucis crassis commixtis; sporidiis distichis, ellipsoideis, non vel leniter inaequilateris, hyalinis, 20-22 \* 10-11, guttula centrali maxima, saepe utrinque altera minuta addita foetis.

Hab, in culmis aridis subputrescentibus Penicillariae typhoidis (Graminaceae), in cultis prope Daccar, Senegal, Africa.

5. Botryosphaeria Hamamelidis Rehm, Ascomyc. exsicc. fasc. 52 n. 2034, 5973 et Ann. Mycol. XI, 1913, p. 108. - Stromatibus ramos corticatos ambientibus, cortici innatis, erumpentibus, peridermio fisso arete cinctis, subrotundato-angulosis, mox lineariter vel stellatim -1 cm. longe 0.5 mm. late seriatis; peritheciis monostichis aggregatis, globulosis, nigris, papillatis, intus albis, 0,2 mm. cr., fusce tunicatis, ad basim hyphis nonnullis, subfuscis, septatis, 4-8 µ cr. obsessis; ascis clavatis, crasse tunicatis, apice rotundatis, breviter stipitatis, -150 ≥ 25-30, octosporis; sporis oblongo-ellipsoideis, utrinque rotundatis, rectis, rarissime subcurvatis, 1-cellularibus, haud guttatis, hyalinis, senilibus dilute fuscidulis, 25-30 × 10-12, distichis; paraphysibus filiformibus, hyalinis, septatis, 2 µ cr.

Hab. in ramis Hamamelis virginianae (Hamamelidaceae), prope London Ont., Canadà, Amer. bor. (J. DEARNESS).

6. Botryosphaeria Marconii Charles et Jenkins, Journ. Agr. Res. III 5974 (1914) p. 83, c. tab. et fig. - Peritheciis globosis, pertusis, 140-160 µ diam., areis pallide olivaceis, luteo-rufis vel griseis innatis; microconidiis polymorphis, ovatis, ellipsoideis vel teretibus, continuis, hyalinis, 4-5,5 × 1,5-2, sporophoris plerumque dichotomo-ramosis, septatis, hyalinis fultis; macroconidiis fusiformibus vel ellipsoideis continuis, hyalino-glaucescentibus, 16-18 > 5-6, sporophoris tenuibus 12-15 μ longis fultis; ascis clavatis, octosporis, 80-90 × 13-15, paraphysibus filiformibus obvallatis, sporidiis fusoideis, e hyalino dilute viridulis,  $16-18 \times 7-8$ .

Hab. in ramis Cannabis sativae (Moraceae) cui noxius, in Amer. bor. -- Status microconidicus (Dendrophoma Marconii Cavr.) macrocon, et ascophorus saepe in ipso perithecio evoluti.

7. Botryosphaeria egenula Syd. et Butl., Ann. Mycol. IX, 1911, p. 415. - 5975

Peritheciis sparsis v. saepissime 2-5 in greges minutos dispositis, subepidermicis, atris, globosis, 200-300  $\mu$  diam., in epiphyllo epidermidem elevantibus, in hypophyllo etiam visibilibus, ostiolo papilliformi dilute colorato praeditis; ascis cylindraceis usque elavatis,  $35-55 \times 12-14$ , octosporis, filiformiter paraphysatis; sporidiis distichis, ellipsoideis v. oblongis, continuis, hyalinis,  $13-18.5 \times 5-7$ .

Hab. in foliis Cymbidii (Orchidaceae), Gauhati, Assam, Indiae or. (E. J. BUTLER).

8. Botryosphaeria Mali V. A. Putterill, South Africa Journ. of Sc. 5976 XVI, 1919, p. 264, cum icon. et tab. XXI-XXX. — Stromatibus plerumque pulvinatis quandoque plus minus effusis rarissime nullis, nigris, erumpentibus, plerumque circ. 0,5 mm. diam.; peritheciis plus minus stromate immersis subpiriformibus emergentibus, 235 × 142; paraphysibus et filis ostiolaribus praesentibus; ascis elavatis octosporis, 96 × 13; sporidiis supra di-tristichis infra monostichis, fusiformibus continuis hyalinis, 19,2·19,5 × 6,5·8. — Pyenidiis subpiriformibus plerumque stromaticis 250 × 190; pilis ostiolaribus praesentibus; paraphysibus nullis; sporulis cylindraceis hyalinis non guttulatis, continuis, 22,4 × 4,8.

Hab. in ramis Piri Mali (Rosaceae) cui valde noxia (ad instar *Physalosporae Cydoniae* et *Sphacropsis malorum*), in Africa austr.

9. Botryosphaeria prunicola Rehm, Ann. Mycol. X, 1912, p. 391. — 5977 ? Botr. aterrima (Fuck.) Sacc., Syll. I, p. 458, Fuckel, sub Melanops. Symb. Myc. p. 225; Fungi rhen. exs. n. 1828. — Peritheciis -30 arcte congregatis sub epidermide nidulantibus, stromatice subfusce ad basim connatis, subglobosis, peridermium protuberantibus, dein disrumpentibus, soros 1-5 mm. lat., orbiculares denudantibus, atris, scabriusculis, poro minutissimo pertusis, 0,3-0,5 mm. diam., siccis patellariformibus, excipulo crasso, glabro, parenchymatice fusce contexto; ascis clavatis, -50 × 8, octosporis; sporis ellipsoideis, rectis v. subcurvatulis, unicellularibus, biguttulatis, hyalinis, 7-9 × 3, 1-2-stichis; paraphysibus filiformibus.

Hab. ad ramos Pruni Padi (Rosaceae), Triglitz, Prignitz, Germania (JAAP).

10. Botryosphaeria Ribis Grossb. et Duggar, New York Agr. Stat. Bull. 5978
18. (1911) p. 128 et seq. tab. I-XII. — Stromatibus subpulvinatis,
1-4 mm., nigris, superficie botryosis, versiformibus peridermio rupto cinetis; peritheciis prominulis, papillatis, paucis in quoque stromate et saepius pycnidiis interjectis, 175-250 μ diam.; aseis cla-

vatis, 80-120 × 17-20; sporidiis fusoideis, hyalinis, continuis, 16-23 \* 5-7, non guttulatis; paraphysibus copiosis, filiformibus. — Pyenidiis (Dothiorella) (interjectis), perithecia aemulantibus; sporulis fusoideis 18-31 \* 4,5-8; pycnidiis solitariis (Macrophoma) subcutaneis, globoso-depressis, 175-250 \( \mu \) diam., ostiolis erumpentibus; sporulis fusoideis continuis,  $16-25 \times 4.5-7.5$ .

Hab, in truncis ramulisque Ribis vulgaris, R. nigri, R. grossulariae (Saxifragaceae), in Americae bor. pluribus locis (Hudson Vall., Mariboro, New York) ubi valde noxia. Quod notas biologicas et culturales cfr. l. c.

11. Botryosphaeria minuscula Sacc., Notae Mycol. XX, in Nuovo Giorn. 5979 bot. it. 23., 1916, p. 200. — Stromatibus seu caespitulis, innatoerumpentibus, nigris, pulvinatis, 0,7 mm. lat., saepe seriatim confluentibus; peritheciis globoso-conoideis, 180-200 µ alt., 130 µ cr. nigris vertice nitidulis, obtuse papillatis, contextu subparenchymatico atro-fuligineo; ascis clavatis, breviter sensim stipitatis, 80-90 \* 13-16, obsolete paraphysatis, octosporis; sporidiis distichis, oblongis utrinque obtuse tenuatis, saepius inaequilateris, 20-24 » 7-8, intus granulosis, hyalinis.

Hab. in ramis corticatis subemortuis Theobromae Cacao (Sterculiaceae), Los Baños, Ins. Philipp. (BAKER). - Socia frequens Lasiodiplodia Theobromae.

12. Botryosphaeria tiliacea Petrak, Ann. Mycol. 14., 1916, p. 166. - 5980 Stromatibus prinum epidermide tectis, demum erumpentibus, dense gregariis, saepe confluentibus, 1-2 mm. longis, 0,5-1 mm. latis extus intusque nigrescentibus; peritheciis stromati immersis, 1-4, globulosis, ostiolo brevissime conico pertuso, 280-350 µ diam.; ascis elavatis, basim versus paullatim attenuatis elongato-stipitatis, apice rotundatis incrassatis, 4-8 sporis 190-210 (p. sp. 90-120) > 28-32, paraphysibus filiformibus obvallatis; sporidiis ellipsoideis vel ovatis utrinque rotundatis, guttulas 2-3 majusculas includentibus, 32-40 \* 16-20, hyalinis vel pallide brunneolis.

Hab. in ramis corticatis emortuis Tiliae platyphyllae (Tiliaceae), M. Weisskirchen, Moravia.

13. Botryosphaeria Bakeri Rehm, Ascomyc. Philipp. II, in Philipp. 5981 Journ. of Sci. VIII (1913) p. 259 .- Stromatibus gregariis, cortici innatis, erumpentibus, orbicularibus, 1.2,5 mm. diam., atris; peritheciis immersis, 4-6, globuloso-conoideis, arcte juxtapositis, dein discretis, nigro-fuscis, rugoso-verrucosis, minutissime papillulatis, parenchymatice fusce contextis, 400-500 µ latis et altis, hyphis sub-

ramosis, fuscis, 4-5 u latis obtectis conjunctisque, siccis apice umbonatis; ascis cylindraceis, apice rotundatis, crasse tunicatis, usque ad 200 \( \times 20, \) octosporis. J., paraphysibus ramosis, septatis, 2 \( \mu \) er.; sporidiis ellipsoideis, utrinque rotundatis, continuis, saepe 1 magniguttatis, hyalinis,  $30 \times 15.16$ , juvenilibus oblongis,  $30 \times 8$ , utraque strato mucoso 5 µ lato obductis, demum dilute flavidulis.

Hab. in ramulis decorticatis, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). — Affinis B. Pruni Mc. Alp., sed sporidiis strato mucoso obvolutis, et B. Hoffmanni v. Höhn. sed peritheciis mycelio obtectis.

- LEPTOSILLIA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 355 (nomen nudum).
- 1. Leptosillia notha v. Höhnel, l. c. Status ascophorus Cytosporinae 5982 nothue (Sace.) Died. — Harpostromae nothue (Sace.?) v. Hölm. 1. c.
- LASIOSORDARIELLA J. E. Chenantais, Bull. Soc. Mycol. de Fr. XXXV, 1919, p. 74, 77. — Sporidia hyalina, apiculata, apice persaepe incrassata. - Typ. gen.:
- 1. Lasiosordariella ovina (Fuck.) Chen., l. c., Leptospora ovina Fuck., 5983 Syll. II p. 199 (in Lasiosphaeria).
- MYELOSPERMA Sydow, Ann. Mycol. XIII, 1915, p. 38 (Etym. myelos mucus et sperma spora). -- Perithecia omnino immersa, peridermio semper tecta, aggregata, globulosa vel irregularia, pariete molliusculo, ostiolo verruciformi. Asci cylindracei, octospori, parce paraphysati. Sporidia continua, hyalina, ellipsoidea, muco obvoluta,
- 1. Myelosperma tumidum Sydow, l. c. p. 38. Peritheciis peridermio 5984 tumidule elevato semper tectis, pluribus (2-10) aggregatis, globulosis vel mutua pressione valde irregularibus, saepe lobatis, ca. 250-350 µ diam., ostiolo verruciformi peridermium perforantibus, pariete molliusculo, tenui, nucleo albo; ascis cylindraceis, apice rotundatis, octosporis, stipitatis, 150-180 × 13-15, parce paraphysatis; sporidiis recte monostichis, rarius oblique monostichis, ellipsoideis, utrinque rotundatis continuis, hyalinis, 20-24 \* 10-13, strato crasso mucoso hyalino obvolutis.

Hab. ad nervum medianum foliorum Cocoës nuciferae (Palmae), Peradeniya, Ceylon (T. Petch).

## Sect. 3. Phaeosporae

MULLERELLA Hepp. - Syll. IX p. 495, XVII p. 593, XXII p. 94.

1. Müllerella Frustulosae Vouaux, Bull. Soc. Mycol. de Fr., 1913, p. 43. 598 Peritheciis sparsis, parum numerosis, omnino immersis, sed apice discoideo sublenticulari emergentibus, nigris, 100-140 µ diam.; contextu crasso firmo brunneo, pseudoparenchymatico e cellulis polygoniis aegre visibilibus, 6-8 µ cr. efformato; ascis fusoideis v. leniter clavatis, utrinque sed plerumque ad basim attenuatis, polysporis (usque 100 et ultra), 95-115 × 17-22; paraphysibus numerosissimis sed parum distinctis, irregularibus, septatis, ramosis et anastomo. santibus, 2-3 µ crassis; sporidiis brunneis, simplicibus, sphaeroideis v. subsphaeroideis v. late ovoideis 4-6 × 4-5.

Hab. in thallo Lecanorae frustulosae (Lichenes), Simpheropolis, Crimea, Rossia (Mereschkowsky).

2. Müllerella Lopadii Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 42.—Pe. 5986 ritheciis sparsis, primum immersis dein 4/3 v.4/2 emergentibus, sphaeroideo-applanatis, depresse ostiolatis, 150-300 µ diam.; contextu brunneo olivaceo basi et medio e cellulis polygoniis 4-5 μ diam. supra multo longioribus efformato; ascis clavatis crasse breviterque pedicellatis, apice late rotundatis, tunica tenui apice tantum crassiori donatis, polysporis, 80-96 × 19-24; paraphysibus tenuissimis, 0,25-0,5 μ crassis, irregularibus, sinuosis, ramosis et anastomosantibus, ascos superantibus; sporidiis sphaeroideis v. subsphaeroideis, primum pallide olivaceis, dein brunneo-olivaceis, 2-3 µ diam.

Hab. in thallo Lopadii fuscolutei var. bispori (Lichenes), Morelia, Mexico, 2300 alt., Amer. bor. (A. BROUARD).

3. Müllerella Stictinae (Oliv.) Vouaux, Bull. Soc. Mycol. de Fr., 1913, 5987 p. 43, Sphaeria Stictinae Oliv., Par. Lich. Fr. Suppl. - Peritheciis punctiformibus minutissimis, atris, dimidiatis, in thallo semiimmersis; ascis caducis, irregulariter inflatis; paraphysibus nullis; sporidiis numerosissimis, brunneis, simplicibus, globulosis v. subglobulosis, 5-7  $\mu$  diam. v. 5-7  $\approx$  5.

Hab. in thallo Stictae silvaticae (Lichenes), St. Gervais Herault, Gallia (A. DE CROZALS).

BAKEROMYCES Syd., Ann. Mycol. XV, 1917, p. 202 (Etym. a cl. C. F. Baker inventore). - Perithecia omnino superficialia mycelio insidentia globulosa pilosula, atra, coriaceo-carbonacea, ostiolata, pa-

renchymatice contexta. Asci cylindraceo-clavati, tenerrimi, facile diffluentes, octospori aparaphysati. Sporae ellipsoideo-oblongae, continuae, ex hyalino coloratae.

1. Bakeromyces philippinensis Syd., l. c.— Mycelium parce evolutum, 5988 superficiale, ex hyphis simplicibus tenuibus fuscidulis remote septatis (articulis 20-30  $\mu$  longis) 2-2,5  $\mu$  crassis compositum; perithecia irregulariter distributa, dispersa vel aggregata, in mycelio omnino superficialia, globulosa, 130-180  $\mu$  diam., atra indistincte ostiolata, tandem cupulato-collapsa, pilis tenuibus fuscidulis 25-60  $\mu$  longis 2-2,5  $\mu$  crassis simplicibus remote septatis laxe obsita, contextu subopaco rufo-atro minute parenchymatico; asci tenerrimi, facile diffluentes, cylindraceo-clavati, 35-45  $\times$  7-9, aparaphysati; sporae distichae, ellipsoideo-oblongae, continuae, utrinque obtase attenuatae vel rotundatae primitus hyalinae, tandem intense griseo-olivaceae, 7-10  $\times$  2,5-3.

Пав. in foliis emortuis Pandani utilissimi (Pandanaceae), Mt. Banahao, Luzon, Ins. Philipp. (С. F. ВАКЕВ).

ANTHOSTOMELLA Sacc. — Syll. I p. 278, IX p. 505, XI p. 281, XIV p. 501, XVI p. 439, XVII p. 594, XXII p. 94.

1. Anthostomella sphaerelloides Sacc., Notae Myc. XXIII (Acc. Venetotrent. 1917, p. 66). — Maculis amphigenis indeterminatis, amplis, supra griseis, subtus subalutaceis; peritheciis amphigenis, gregariis, punctiformibus, globoso-lenticularibus, 150-200 μ diam., subcutaneo-erumpentibus, ostiolo vix papillato; contextu indistincte celluloso atrofuligineo; ascis minutis cylindricis, apice rotundatis, deorsum breviter tenuatis, mucoso-paraphysatis, 45-50 × 4,5-5, octosporis; sporidiis oblique 1-stichis, ellipsoideis, utrinque rotundatis, saepe inaequilateris, 8-9 × 3,5-4, atro-fuligineis, obsolete 1-2-guttulatis.

Hab. in foliis languidis Uvariae sorsogonensis (Anonaceae), Los Baños, Ins. Philipp.— Tenuitate omnium partium, quasi Sphaerellae, dignoscitur.

2. Anthostomella? micraspis (Berk.) Sacc. et Trav. — Syll. XXII p. 5990 108. — Teste cl. Rehmio, Ascomyc. Philipp. V p. 2197, diagnosis ita integranda: Peritheciis erumpentibus, in ligno late denigrato plerumque 4-18 congregatis, rarissime solitariis, lata basi sessilibus, ovoideo-conoideis, ostiolo brevi atro instructis, fusco-nigris, glabris, carbonaceis, 1 mm. diam.; aseis clavatis, ad apicem rotundatum crasse tunicatis, 4-sporis, 120-150 × 20-25, paraphysibus filiformibus septatis 2,5 μ cr. obvallatis; sporidiis parallele dispositis,

elongato-fusiformibus, utrinque subacutis, rectis vel parum curvatis, continuis, hyalinis dein flavo-fuscis, strato mucoso tenui obductis,  $70 \times 10$ -13.

Hab. etiam in Alchornea rugosa (Euphorbiaceae), Luzon, Prov. Laguna, Los Baños ins. Philipp. (C. F. BAKER).

3. Anthostomella mirabilis (B. et Br.) v. Höhn.— Syll. I p. 293 sub Artrocystis, nec Spegazzini, Syll. I p. 288.—Var. obtecta Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2261.— Peritheciis sub epidermide nidulantibus eaque verrucoso-elevata sed non dilacerata obtectis, ostiolo papillulato atro tantum prominentibus; ceterum ut species.

Hab, in Bambusa vulgare emortua (Graminaceae). Los Baños, ins. Philipp. (S. A. REYES).—Var. Schizostachyi Rehm, ibid., p. 2260.— Hab. in Schizostach yo (Graminaceae), Los Baños, ins. Philipp. (S. A. REYES).—Cum Anth. grandispora var. Schizostachyi Rehm comparanda (enfr. n. 9).

4. Anthostomella discophora Syd., Enum. Philipp. Fungi II, in Philipp. 5992 Journ. of Sci. VIII (1913) p. 485. — Peritheciis sparsis vel binis aut ternis consociatis, planis, lenticularibus ambitu rotundatis, 0,5·1 mm. diam., centro immersis, atris, opacis, areola, plana, marginata, circulari, minuta sed semper bene distincta medio obtuse papillata praeditis; ascis..... jam resorptis; sporidiis ellipsoideis, continuis, utrinque obtusulis, fuscis, 11·15 × 5·7.

Hab. in culmo emortuo Bambusae (Graminaceae), Luzon, Prov. Bataan, ins. Philipp. (GRAFF).

5. Anthostomella profunda Sacc., Philipp. Journ. of Sc. Manila, P. I, 5993 1921, p. 597. — Peritheciis gregariis, strato ligneo profunde immersis globulosis, 0,5-0,7 mm. diam., et collo longiusculo, cylindrico, matricis superficiem circulariter e sporis nigro-foedatam, attingentibus, contextu molliusculo, olivaceo-fusco; ascis cylindricis, breviter stipitatis, apice rotundatis 140-150 × 9-10, filiformi paraphysatis, octosporis; sporidiis recte monostichis, ellipsoideis, 14 × 9, fuligineis, initio strato hyalino obvolutis.

Hab. in culmis emortuis B a m b u s a e sp. (Graminaceae), Kwang Tung, Canton, Cina (Reinking). — A ceteris congeneribus bambusicolis diversa.

6. Anthostomella atronitens Rehm, Ascomyc. Philipp. V, Leaflets of 5994 Philipp. Botany, VI (1914) p. 2196. — Peritheciis gregariis late distributis, immersis, e basi applanata hemisphaerice prominentibus, epidermide nigrificata tectis, nitentibus, minutissime papillu-

latis, ostiolo conspicuo pertusis, 0,8-1 mm. diam.; ascis evanidis; sporidiis ellipsoideis, continuis, fuscis, 15 \* 8.

Hab. in culmis emortuis Donacis cannactormis (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

7. Anthostomella donacina Rehm, Ascomyc. Philipp. III, in Philipp. 5995 Journ, of Sci. VIII (1913) p. 399. - Peritheciis in maculis nigritulis, suborbicularibus, 1-2 cm. latis, raro deficientibus, gregarie innatis, dein prorumpentibus, primitus areola nigra minima tectis, globosis, minutissime papillulatis, poro perspicuo pertusis, 300 µ latis, excipulo parenchymatice fusce contexto; ascis cylindraceis, octosporis, 40-50 \* 4-5, J-, paraphysibus non conspicuis; sporidiis monostichis, oblongis, utrinque rotandatis, rectis, non guttatis, fuseidulis,  $7-8 \approx 2 \cdot 2.5$ .

Hab. in Donace cannaeforme emortuo (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).— E stirpe A. phaeostictae (Bk.) Sacc., A. minori E. et E. quoque proxima. — Teste ipse Rehmio (Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2259) diagnosis ita rectificanda; ascis clavatis 60-70 × 12-14, octosporis, J-; sporidiis distichis 15-18 × 5-8; paraphysibus filiformibus.

8. Anthostomella miscanthea Sacc., Notae Myc. XXIII (Acc. Veneto- 5996 trent. 1917, p. 65). - Peritheciis innatis, utrinque visibilibus, gregariis, globoso-ovoideis, 0,3.0,5 mm. diam., obsolete papillatis, epidermide atrata tectis; ascis cylindraceis deorsum breviter tenuatis, apice rotundatis, 60-65 \* 6, octosporis; paraphysibus non observatis; sporidiis oblique monostichis, oblongo-ellipsoideis, inaequilateris, 11-12 \* 4-4,2, fuligineis, obsolete 1-guttatis.

Hab. in foliis emortuis Miscanthi japonici (Graminaceae), M. Banahao, Ins. Philipp. (BAKER). - Videtur affinis Ant. paraguayensi Speg. a qua differt situ in foliis, peritheciis majoribus epidermide atrata tectis, sporidiis vix compressis etc.

9. Anthostomella grandispora Penz. et Sacc. Syll. XIV, 502 - Var. 5997 Schizostachyi Rehm, Ascomyc. Philipp. II, in Philipp. Journ. of Sci. VIII (1913) p. 258. — Peritheciis creberrimis, cortici innatis, solitariis vel longitudinaliter longe seriatis, per epidermidem haud nigritulam, striaeformiter vel laciniatim disruptam ostiolo minimo prorumpentibus, globulosis, atris, membranaceis, hyphis fuscis, plerumque simplicibus demum mycelium formantibus ad basim obsessis, 200 µ diam.; ascis oblongis, crasse tunicatis, apice rotundatis, ca-

 $90 \times 25$ , paraphysibus filiformibus septatis 2  $\mu$  cr. obvallatis; sporidiis distichis, oblongo-ellipsoideis, continuis, fuscis,  $28\text{-}30 \times 10\text{-}12$ .

Hab. in culmis emortuis Schizostach yi acutiflori (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). — Sec. Sacc. (Notae Mycol. XX, Nuovo Giorn. bot. it. 23., 1916, p. 202): sporidia oblongo-rhomboidea, fuliginea, 40-41 × 14-15 utrinque acutula, interdum strato mucoso obvoluta et a typo videtur specifice distinguenda. Cnfr. etiam n. 3.

10. Anthostomella? Puiggarii Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 5998 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 105. — Peritheciis laxe gregariis innato-erumpentibus, lenticulari-subconicis minutis 120-150 μ diam., atris carbonaceis, contextu atro carbonaceo opaco indistincto, ostiolo papillato minuto pertusis; ascis cylindraceo-subfusoideis, breviter pedicellatis, paraphysatis, 100 × 15; sporidiis elliptico-fusoideis, utrinque acutiusculis continuis fuligineis, 28-30 × 6.

Hab. parasitica in stromatibus Phyllachorae tropicalis in foliis Myrtaceae cujusdam, prope Apiahy, Brasilia, America austr. (J. Puiggari).

11. Anthostomella Arecae Rehm, Ascom. Philippin. VIII, in Leafit. of 5999 Philippin. Bot. VIII, 1916, p. 2938. — Perithecia in cortice late fuscidulo innata dispersa, conoidea, ad basim extus nigrata, ab epidermide tenuissime marginata, in papillulam brevem protracta, poro perspicuo-pertusa, glabra, nigra 1-1,5 mm. lata, 1 mm. alta, carbonacea; ascis resorptis; sporis fusoideis utrinque longe acutatis, 1-cellularibus, fuscis, 70 × 9.

Hab. ad emortuos stipites Arecae catechu (Palmae), Los Baños, Ins. Philipp. (C. F. Baker). — Perithecia primo obtutu fere sessilia circum denigrata demum attamen basi distincte innata, ab epidermide distincte marginata ad Anthostomellam hane fungum ponunt. Anthostomella bahiensi (Hemfl.) Speg. in Sacc., Syll. XXII, p. 96, imprimis sporis latioribus obtusis diversa.

12. Anthostomella mindorensis Relun, Ascomyc. Philipp. III, in Phi-6000 lipp. Journ. of Sci. VIII (1913) p. 398. — Peritheciis in maculis corticis ellipsoideis, ad 1 cm. longis, 3-4 mm. latis, demum confluentibus, nigro-fuscis gregarie innatis, conoideis, minute papillulatis. atris, glabris, subcoriaceis, 200 μ latis; ascis cylindraceis, apice rotundatis, filiformi-paraphysatis, 100 × 10, octosporis, porus intus 2, J +; sporidiis, monostichis, oblongis, utrinque obtusis, continuis, fuscis, haud guttatis, strato mucoso tenui obductis, 12-15 × 7-9.

Hab. in rhachide emortua Arengae mindorensis (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (E. B. Copeland). — Anth. contaminanti Dur. et Mtg. valde proxima. — Var. verruculosa Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botamy, VI (1914) p. 2196. — Peritheciis apice truncatulis, verruculosis, 1-1,5 mm. latis. Hab. in petiolis emortuis Arengae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. Reyes).

13. Anthostomelia Sacchariferae Relun, Ascomyc. Philipp. VI, Lea-6001 flets of Philipp. Botany, VI (1914) p. 2260. — Peritheciis culmo latissime aequaliter denigrato gregarie innatis, epidermidem protuberantibus, globulosis, ostiolo minimo vix papillulato prominentibus, membranaceo-contextis, 150 μ latis; ascis cylindraceis, 50-60 × 5, J-, paraphysibus filiformibus obvallatis; sporidiis monostichis, ellipsoideis, plerumque navicularibus, utrinque acutatis, continuis, fuscis, 8-9 × 3.

Hab. ad petiolos emortuos Arengae saechariferae (Palmae), Los Baños, ins. Philipp. (S. A. Reyes). — Var. Demonoropis Sacc., Notae Myc. XXIII (Acc. Veneto-trent. 1917, p. 65).— A typo recedit sporidis paullo amplioribus, nempe 10-12 × 4,5; ascis 45-50 × 4,5, paraphysatis. Sporidia fuliginea, subinde diblasta cum intervallo hyalino; perithecia 180-200 μ diam.

Hab. in rhachide De monor op is emortua (Palmae), in M. Maquiling, Ins. Philipp. (BAKER). — Perithecia nunc maculae late attratae subjecta, nunc sine macula. Fm. immaculata forte congruit cum Anth. phoenicicola Speg. quae anterior.

14. Anthostomella Calami Rehm, Ascom. Philippin. VIII, in Leafit. of 6002 Philippin. Bot. VIII, 1916, p. 2939. — Perithecia carbonacea verruculosa, a peridermio arcte adhaerente fere obducta, apice saepe
subumbilicata et crasse breviter papillulata foveolam crasse carbonaceam relinquentia. Ceterum ut in Anthostomella mirabilis (B.
et Br.) v. Hoehn.

Hab. ad emortuum Calamum (Palmae), Mt. Maquiling, Ins. Philipp. (S. A. REYES et C. F. BAKER).

15. Anthostomella hicinota Sydow, Philipp. Journ. of Sc., Sect. C v. 9., 6003 n. 2, 1914, p. 165. — Peritheciis densiuscule sparsis, omnino immersis, atris globosis, 350-425 μ diam., epidermidem atro-nitidulam leniter elevantibus, coriaceo-mollibus; ascis cylindraceis, apice obtusis, 100-125 μ longis, 13-16 μ latis, octosporis poro jodi ope coerulescente; paraphysibus leniter mucosis; sporidiis reete monostichis, continuis, ellipsoideis, utrinque rotundatis, ex hyalino mox

fuseis, centro zona latiuscula 2-4  $\mu$  lata dilutiore vel subhyalina einetis, praeterea strato mucoso 1,5-2,5  $\mu$  lato distinctissimo circumdatis, 15-18  $\mu$  longis 9-10  $\mu$  latis (sine muco).

Hab. in foliis (petiolis) emortuis Cary o tae (Palmae), Palawan Taytay, Ins. Philipp. (MERRILL).

16. Anthostomella cocoina Sydow, Philipp. Journ. of Sc., Sect. C., v. 6004 9, n. 2, 1914, p. 166.—Peritheciis plerumque dense dispositis, subinde maculiformiter confertis, immersis, epidermidem denigratam hemisphaerice elevantibus, semper tectis, modo papilla minuta poro perspicua pertusa tandem prominente globosis, glabris, atris, 200-300  $\mu$  diam.; ascis cylindraceis, apice rotundatis, 75-95  $\mu$  longis, 6-7  $\mu$  latis, octosporis; sporidiis monostichis, ellipsoideis, utrinque rotundatis vel leniter attenuatis, continuis, fuscis, exappendiculatis, 8-10  $\mu$  longis, 3,5-5  $\mu$  latis.

Hab. ad petiolos et rachidem foliorum Cocos nucifera e (Palmae), Palawan, Taytay, Ins. Philipp. (MERRILL).

17. Anthostomella Coryphae Rehm, Ascom. Philippin. VIII, in Leafit. 6005 of Philippin. Bot. VIII, 1916, p. 2940.— Perithecia in maculis ellipsoideis, 1-2 cm. longis, circiter 0,5 cm. latis dilute nigritulis, cortice gregarie profunde innata, globulosa, aliquantulum convexe prominentia, vix papillulata, atra, 0,5-0,8 mm. lata parenchymatice contexta. Ascis cylindraceis, 100-110 ≈ 15, 8-sporis, J-. Sporis oblongis, utrinque rotundatis, 1-cellularibus obscure fuscis, 10-15 ≈ 8-10, 1-stichis. Paraphyses filiformes.

Hab. ad petiolos emortuos Coryphae elatae (Palmae), Los Baños, Ins. Philipp. (C. F. BAKER).

18. Anthostomelia phoenicicola Speg., Mycet. Argent. VI, Anal. Mus. 6006 Nac. Buenos Aires, XXIII p. 50 (1912). — Maculis nullis sed matrice late sordideque cinerascente; peritheciis ligno immersis, vix ostiolo minutissime papillato epidermidem perforante manifestis, epidermide infuscata tectis sed clypeo stromatico proprio destitutis, globoso-depressis, minutis, 120-150  $\mu$  diam., coriaceis, atris, contextu indistincto; ascis subcylindraceis, apice saepius bifoveolatis, basi sensim leniterque angustatis, breviter pedicellatis, 85-100  $\times$  5-8, paraphysibus filiformibus paucis commixtis; sporidiis monostichis, ellipsoideis, utrinque subacutato-rotundatis, eguttulatis, levibus, fuligineis, 10-13  $\times$  3-4.

Hab. in petiolis dejectis putrescentibus Phoenicis can ariensis (Palmae), in hortis, La Plata, Argentina.

19. Anthostomella nummularioides Speg. in Anal. Mus. Nac. Buenos 6007

Aires XXVI p. 122 (1914).— Maculis amplissimis, irregulariter alliptico-elongatis, saepe confluentibus et totam matricem obtegentibus, atris; peritheciis hinc inde confertiusculis, innato-erumpentibus, globulosis, atris, glabris, 100-150 μ diam., ad medium et ultra substrato immersis, vix ostiolato-perforatis, non papillatis, contextu indistincto; ascis cylindraceis, basi breviuscule attenuato-pedicellatis, 90-110 × 8-10, paraphysibus paucis filiformibus parum longioribus obvallatis; sporidiis rectis vel oblique monostichis, cylindraceo-ellipsoideis, utrinque rotundatis, eguttulatis, fuligineis, 10-14 × 6-7.

Hab. in spathis putrescentibus Phoenicis? canariensis (Palmae), in dunis maritimis prope Dacear, Senegal.

20. Anthostomella confluens Petch, Rev. Ceylon Fungi, Ann. R. Bot. 6008 Gard. Peradeniya VI, P. II, 1916, Extr. p. 27.— Anthostomella dilatata (B. et Br. in gen. Pemphidio) Petch p. p. — Peritheciis subepidermicis, lenticularibus, nigris, carbonaceis, 0,3 mm. circ. diam., poro circulari apertis sed ostiolo non prominenti; sparsis, stromate ex epidermide nigrefacta formato circumdatis, coeterum plus minus effuso; ascis non visis; sporis anguste ovoideis, utrinque rotundatis, e fuligineis nigricantibus, 9-12 × 3-4.

Hab. in petiolis Palmae cujusdam, Ceylon.

21. Anthostomella calocarpa Syd., Enum. Philipp. Fungi I, in Philipp. 6009

Journ. of Sci. VIII (1913) p. 272. — Sparsa vel aggregata, subinde confluens; pseudostromate orbiculari vel ellipsoideo, 0,6-1 mm. longo, nitido, aterrimo; perithecio singulo in quoque pseudostromate, globuloso, papillato, 300-400 μ diam.; ascis clavatis, apice rotundatis, 110-130 × 16-21, filiformi-paraphysatis, octosporis; sporidiis monostichis vel subdistichis, ellipsoideis, continuis, utrinque rotundatis, primo hyalinis, mox amoene intenseque luteo-brunneis, 22-26 × 11-13.

Hab. in basibus foliorum emort. Pandani tectorii (Pandanaceae), Luzon, Manila, ins. Philipp. (Merrill). — Teste auctore, huc pertinet Sphaeropsis Pandani P. Henn. — Syll. XXII p. 983, in qua cl. Hennings ascos non vidit.

22. Anthostomella lucens Sace., Notae Mycol. XX, Nuovo Giorn. bot. 6010 it. v. 23., 1916, p. 201. — Peritheciis sub clypeo epidermico convexo nigro nitidissimo, circulari 1 mm. diam. abditis, globoso-depressis, 0,25 mm. diam., ostiolo papillato erumpente in medio clypei; contextu submembranaceo, fuligineo; ascis cylindricis praelongis, angustis, 100-125 × 9-10, apice obtusulis, in pedicellum brevem

tenuatis, copiose filiformi-paraphysatis, octosporis; sporidiis recte v. oblique monostichis, ellipsoideis, saepe inaequilateris, utrinque rotundatis, 1-2-guttatis, primo hyalinis, mox olivaceis, demum fuligineis,  $14-16 \times 7-8,5$ .

Hab. in utraque pagina, copiosius in superiore, foliorum v. vaginarum emortuarum Pandani sp. (Pandanaceae), Los Baños, Ins. Philipp. (Baker).— Ab Anth. Pandani (Rabenh.) Sacc. videtur differre clypeo amplo nitido, de quo auctor, silet. Ab Anth. calocarpa Syd. ascis sporidiisque multo angustioribus etc. recedit.

23. Anthostomella sorbina Rehm, Ann. Mycol. X, 1912, p. 390.— Pe-6011 ritheciis gregariis cortici nigritulo innatis protuberantibus et vix ostiolo minutissimo demum prorumpentibus, globosis, 0,5-0,7 mm. diam., carbonaceis; ascis evanidis; sporis subglobosis, unilocularibus, fuscis, strato gelatinoso tenui obductis, 18-20 × 10-12.

Hab. ad ramulos Sorbi Aucupariae (Rosaceae), in alpe Schlappolteck Algoviae, Bavaria (ADE).

24. Anthostomella Arunci v. Höhnel, Ann. Mycot. 16., 1918, p. 71.— 6012 Peritheciis valde variabilibus usque 1 mm. cr., sparsis v. aggregatis confluentibusque quandoque globoso-depressis verruciformi prominentibus in cortice immersis et eum hemisphaerice elevantibus, apice clypeo epidermali 40-50  $\mu$  cr. praeditis, nigris; contextu infra 40 supra 40  $\mu$  cr., membranaceo-carbonaceo pseudoparenchymatico; paraphysibus numerosis, tenuiter filiformibus, elongatis muco conglutinatis; ascis cylindraceis apice obtusis infra pedicello usque 50  $\mu$  longo attenuatis, 155  $\approx$  8, octosporis; poro ascorum J ope cyanescente; sporidiis monostichis, nigrescentibus biguttulatis, ellipsoideis v. fusoideis infra vix hyalino-apiculatis, 12-15  $\approx$  6-6,5.

Hab. in caulibus putrescentibus Spiraeae Arunci (Rosaceae), prope Königstein, Saxonia, Germania (W. KRIEGER).

25. Anthostomella Copelandi Rehm, Ascomyc. Philipp. V, Leafits of 6013 Philipp. Botany, VI (1914) p. 2197.— Peritheciis gregariis, cortici immutato innatis eumque prorumpentibus, initio cortice arcte cinctis dein sessilibus, plerumque solitariis, interdum binis connexis, globosis, apice late circulariter annulatis, medio conice papillulatis, poro perspicuo pertusis, contextu parenchymatico coriaceo nec carbonaceo, nigris, glabris, ad basim fuscescentibus, siccis scabriusculis, typice 2 mm. latis, 1,5 mm. altis; ascis evanidis; sporidiis oblongis, utrinque rotundatis, rectis, fuscis, 25 × 10-12.

Hab. in cortice emortuo, Luzon, Prov. Benguet, Panai, ins. Philipp. (E. B. COPELAND).

26. Anthostomella Elmeri Syd., Leadlets of Philipp. Bot. V (1912) p. 3014 1544.— Peritheciis corticolis, sparsis vel aggregatis, subinde binis vel ternis dense aggregatis et subconfluentibus, rotundatis, peridermio leniter pustulatim elevato et circumcirca nigricante primitus tectis, dein erumpentibus, 400-500 μ diam., planinsculis, ostiolo valido nitido brevi; ascis cylindraceis, 70-80 × 7-10, octosporis; paraphysibus numerosis, filiformibus, ascos superantibus, 1-1,5 μ crassis: sporidiis monostichis, ellipsoideis, continuis, primitus hyalinis et grosse 3-4-guttatis, tandem fuligineis et eguttulatis, haud appendiculatis, 10-13 × 4-5.

Hab. in ramis dejectis, Puerto Princesa, Palawan, ins. Philipp.

27. Anthostomella lichencides Rehm, Ascomyc. Philipp. V, Leaflets of 6015
Philipp. Botany, VI (1914) p. 2197.— Peritheciis gregariis, cortici
dealbato innatis, extus atratis, globuloso-conoideis, dimidia superiore parte prominentibus, minute papillulatis, poro lato pertusis,
atris, glabris, carbonaceis, 0,5-1,5 mm. latis; ascis evanidis; sporidiis ellipsoideis, utrinque acutatis, subfuscis, 30 × 10-14.

Hab. in ramo humistrato, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

28. Anthostomella uberiformis Rehm, Ascom. Philippin. VIII, in Leaflt. 6016 of Philippin. Bot. VIII. 1916, p. 2937. — Perithecia dispersa, cortici innata, dein prorumpentia, demum in figno late denigrato sessilia, globulosa, crasse carbonacea, verruculosa, glabra, apice disciformiter applanata, medio minute papillulata, ad basim 2-3 mm. lata, 1,5 mm. alta. Ascis evanidis; sporis ellipsoideis interdum subcurvatulis, 1-cellularibus, fuscis, 10-12 × 5-6.

Hab. ad truncum putridum in cacumine Mt. Maquiling. Ins. Philipp. (C. F. BAKER). -- Perithecii forma et magnitudine eximia species.

## PARANTHOSTOMELLA Speg. — Syll. XXII p. 101.

Paranthostomella Capparidis Syd. et Butl., Ann. Mycol. IX, 1911, 6017
 p. 408. — Peritheciis epiphyllis, in hypophyllo plerumque etiam conspicuis, maculis magnis effusis, flavidis v. brunneolis saepe confluentibus insidentibus, gregariis, immersis, sphaeroideis, ostiolatis, atris, 160-240 μ diam.; ascis ellipticis v. oblongis, paucis in quoque perithecio, difficile perspiciendis, 2-6-sporis, 40-70 × 16-25; sporidiis ellipsoideis, continuis, utrinque rotundatis, primo hyalinis, dein brunneis, 18-22 × 10-12.

Hab. in foliis vivis v. languidis Capparidis spinosae

var. Leucophylla e (Capparidaceae), Pusa (INAYAT), Capparidis sp., Khulna Bengalia, Indiae or. (P. N. BATTACHARIYA).

- LEPTOMASSARIA Petrak, Ann. Mycol. XII, 1914, p. 474. Stroma omnino deest. Perithecia singula, raro 2-3 approximata, magna, subglobosa, coriaceo-subcarbonacea, cortice omnino immersa, extus crusta albido-flavescenti obducta, ostiolo brevi truncatulo non excedent. Asci cylindracei, basim versus paullatim attenuati, longe pedicellati 8-spori, paraphysati. Sporidia ellipsoidea, utrinque rotundata continua, fusco-nigra, strato tenui hyalino obvoluta. — Est Massaria phaeospora; an potius Anthostomati proxima? — Typus gen. :
- 1. Leptomassaria simplex (Otth) Petrak, l. c., Anthostoma simplex (Otth) 6018 Sacc., Syll. XIV p. 503, Quaternaria simplex (Otth) Nkc.
- ROSELLINIA De Not. Syll. I p. 252, IX p. 495, XI p. 280, XIV p. 494, XVI p. 435, XVII p. 595, XXII p. 102.
- 1. Rosellinia laminariana Sutherl., Trans. Mycol. Soc. V (1916) p. 256 6019 t. V fig. 1-3. — Peritheciis immersis et maturis erumpentibus vel ab initio superficialibus et subiculo denso cinctis, globosis, excipulo crasso, ostiolo conico, primo hyphis tectis dein nudis, 350-450 μ diam.; ascis cylindraceis, longissimis, octosporis, apice obtusis, 150 × 15; sporidiis monostichis, ellipsoideis vel ovoideis, primo annulo mucilagineo circumdatis, fulvis vel nigris, plerumque guttulam oleosam amplam exhibentibus, 20-22 × 12-14; paraphysibus crassis, articulatis, maturis deliquescentibus.

Hab. in thallo Laminariae (Algae), Dorset, Britannia.

2. Rosellinia Mangiferae Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 6020 p. 405. — Peritheciis gregariis, sed discretis, in partibus matricis saepe nigrificatis v. fusco-tinctis maculiformibus insidentibus, basi cortici semper immersis, e basi lata applanato-hemisphaericis, atris, 250-400 μ diam., opacis, minutissimis, papillatis, ascis cylindraceis, 140-180 × 11-18, octosporis, copiosissime paraphysatis; sporidiis ellipsoideis, utrinque rotundatis, continuis, fuscis, 20-24 \* 9-12, monostichis v. oblique monostichis.

Hab. in cortice Mangiferae in dicae (Anacardiaceae), Chittagong, Indiae or. (R. SEN).

3. Rosellinia (Coniochaeta) nigerrima Peyronel, Nuovo Giorn. bot. it. 6021 25., 1918, p. 411, fig. 1-3. — Hyphis mycelicis per ligni fibras decurrentibus septatis ramosis, e hyalinis olivaceo-atris, nune subti-

lissimis vix 0,5  $\mu$  nune usque ad 5  $\mu$  cr.; peritheciis subsphaericis v. plerumque conico-ovatis, ob setulas rigidas hirsutis nigerrimis. 350-500  $\mu$  latis; excipulo carbonaceo contextu pseudoparenchymatico e cellulis irregulariter subpolygoniis 8-20 (plerumque 12-16)  $\mu$  latis constituto; setulis rigidis, subulatis, basi incrassato-bulbosis, atris, 1-4-septatis, septis tamen in vetustis ob membranae cutinatae crassa atritudinem non v. vix perspicuis, 60-300  $\mu$  long.; ascis cylindraceo-clavatis, pedicellatis, apice foveolatis, octosporis, 80-95  $\approx$  7-7,5, paraphysibus filiformibus, hyalinis obvallatis; sporidiis oblique monostichis, ellipticis, umbrinis, 9,5-12  $\approx$  5-5,5.

Hab. in ligno decorticato marcescente Alni viridis (Betulaceae), Riclaretto, Pedemontium, loco dicto « Lu Bric di Plan », 1700 m. alt., Italia bor. — Socio Hormodendro nigerrimo eius stat. conidico.

4. Rosellinia rhanicensis Petrak, Ann. Myc. 14., 1916, p. 159 (hranicensis). — Peritheciis gregariis caespitosis vel epidermide tectis vel erumpentibus fusco-nigris subcoriaceis subglobosis saepe parum depressis, ostiolo brevissime conico pertuso 140-160 μ diam. Ascis anguste cylindraceis breviter stipitatis apice rotundatis, basim versus vix attenuatis, 90-100 × 6-8, octosporis. Sporidiis monostichis ellipsoideis vel ovatis, raro fere globosis utrinque rotundatis fusconigris, guttulas 1-3 majusculas includentibus, 8-12 × 6-7; paraphysibus tenuissimis filiformibus; ascis parum longioribus vel fere aequilongis.

Hab. in ramis emortuis Alni rotundifoliae (Betulaceae), pr. M. Weisskirchen Moraviae. — Ros. conglobatae valde affinis. Obs. Graphia hramiensis ab orthographia latina est aliena.

Rosellinia andurnensis Ces. et De Not. — Syll. I p. 253.—Var. mi- 6023
 nor v. Höhnel in Strasser, Verh. zool.-bot. Ges. Wien, 69., 1919,
 p. 359. — Sporidiis fusoideis e latere depressis, exappendiculatis,
 22 \* 6.

Hab. in foliis dejectis Abietis (Coniferae), Sonntagberg, Austria inf.

6. Rosellinia weiriana Sacc., Nuovo Giorn. bot. it. v. XXVII, 1920, 6024 p. 77. — Peritheciis dense aggregatis, biogenis (semper?), superficialibus, glabris, nitidulis, globosis, minute papillatis, 0,5-0,7 mm. lat., contextu coriaceo-carboneceo, atro; ascis (non bene visis) crasse breviterque clavatis, ápice rotundatis, 175 × 68, breviter stipitatis, copiose denseque filiformi-paraphysatis, 1-2-sporis (?); sporidiis oblongo-ellipsoideis, utrinque obuse tenuatis, magnis, 100-115

\* 45-48, fuligineis, ex uno apice (semper superiori?) caudam primo hyalinam incurvato-adhaerentem demum fuligineam 45-70 × 9-10, cylindraceam emittentibus (vetustis longitrorsum rimose dehiscentibus).

Hab. in ramulis vivis Piceae Engelmanni (Coniferae). Spokane, Washington, Amer. bor. (WEIR). - Sporidia initio hyalina, minora 60-85 × 22, acque caudigera. Species singularis et ob sporidia et ascos peculiares forte novi generis typus (Weiriella). An Piceis infesta?

7. Rosellinia Gravesii Sacc. n. - Rosellinia sp. Graves in Phytopatho- 6025 logy IV (1914) p. 70 fig. 7-10 et tab. V. - Mycelio ramulos et basim foliorum ambiente, e griseo luteo-brunneo, plus minusve evoluto 2,5-5 µ diam.; peritheciis gregariis, interdum subconfluentibus, globosis vel globoso conoideis, atris, minute papillato-ostiolatis, 0,5 mm, circ, diam., omnino superficialibus mycelioque insidentibus sed non immersis; ascis et sporidiis non visis; conidiophoris ramosis, apice botryoideis; conidiis in ramulis acrogenis, late ovoideis, hyalinis,  $6.5 \approx 4$ .

Hab. in ramulis junioribus plantularum Tsugae canadens is (Coniferae), in Amer. boreali. - Affinis, ut videtur, R. subiculatae (Schw.) Sacc. et valde noxia.

S. Rosellinia arcolata Sacc., Ann. Mycol. XI, 1913, p. 314. — Perithe- 6026 ciis hine inde dense confertis, superficialibus, sessilibus, subglobosis, leniter depressis, 0,7-1 mm. diam., nitidule nigricantibus, carbonaceis, glabris, ostiolo minutissimo, papillato, in centro areolae depressae, 400 \mu latae, circularis sito; ascis cylindricis, apice rotundatis, p. sporif. 80 × 5-6, in stipitem 80-100 \( \mu \) longum tenuatis; paraphysibus filiformibus 2,5 µ cr. minute guttulatis obvallatis, octosporis; sporidiis ellipsoideo-oblongis, utrinque acutulis, rectis v. leviter inaequilateris, 10-12 \(\infty\) 5, atro-fuligineis.

Hab. in ramis corticatis emortuis Fagi sp. (Fagaceae), prov. Mino, Kawauye, Japonia (HARA). - Forte affinis Ros. breensi Starb. et R. sed distinctissima. Cum Ros. nitenti Ces. tantum congruit arcola ostiolari, sed forma perithecii vix nitentis, subiculi defectu statim dignoscitur.

9. Rosellinia tunicata W. Kirschst., Krypt. Fl. Brandenb. VII p. 217 6027 (1911). — Peritheciis superficialibus, basi insculptis, sparsis vel paucigregariis, sphaericis vel sursum attenuatis, ostiolo papillato praeditis, 200-300 µ diam., excipulo coriaceo, atro, in parte superiore setulis brevibus ornato, massa luteo-brunnea usque ad ostiolum atrum emergente tectis, per aetatem saepe nudis; ascis cylin-

draceis, breviter pedicellatis, sursum applanatis incrassatisque, 120-140  $\approx$  9-10; paraphysibus filiformibus simplicibus obvallatis: sporidiis monostichis, plerumque oblique dispositis, initio olivaceis, granuloso-farctis, eguttulatis, demum atro-branneis, ellipsoideo-oblongis, e latere paullulo compressis, limbo marginali distincto praeditis,  $13-17 \approx 7-8$ .

Hab. in ligno fabrefacto putri Quereus (Fagaceae), Grossbehnitz, Germania. — Affinis R. ligniariae (Grev.) sed peritheciis minoribus tunicatis facile distinguenda. Proxima quoque R. sanguinulentae (Wallr.).

10. Rosellinia fusispora W. Kirschst., Krypt. Fl. Brandenb. VII p. 213–6028 (1911). — Peritheciis superficialibus, in greges plus minusve extensos dense concervatis, saepe confluentibus, subiculo filamentoso atro-brunneo insidentibus, globosis, 1 ½ mm. circ. diam., ostiolo minuto obtuse conoideo praeditis, excipulo carbonaceo, fragili, atro, in juventute griseo-ardesiaco; ascis cylindraceis, apice rotundato-incrassatis, basi longe pedicellatis. octosporis, p. sp. 155-165 × 8-9; paraphysibus filiformibus longioribus obvallatis; sporidis recte monostichis, irregulariter fusoideis, interdum semilunatis, utrinque abrupte hyalino-apiculatis, ibique breviter setoso-appendiculatis, in sectione subtrigonis, initio olivaceo-viridulis, guttulatis, dein obseure brunneis, continuis, 24-32 × 6-8.

Hab. in culmis Graminum et in hymenio Lenzitis betulinae (Fungi), Rathenow, Germania.

11. Rosellinia rachidis Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 6029
Botany, VI (1914) p. 2198. — Peritheciis sparsis, conoideis, lata
basi circulari anguste nigrocineta, sessilibus, atris, dilute albidule
pruinatis, 1 mm. diam, excipulo glabro, interdum circulariter paullulum constricto, carbonaceo; ascis cylindraceis, 50-60 × 4, octosporis, J-, paraphysibus paucis obvallatis; sporidiis monostichis,
oblongis, interdum allantoideo-subcurvatis, utrinque guttulatis, fuscidulis, 5-7 × 2.

Hab. in rachide viva G i g a n t o c h l o a e (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

12. Rosellinia (Calomastia) dolichospora H. et P. Sydow, Ann. Mycol. 6030 IX, 1911, p. 145. — Peritheciis sparsis vel hine inde paucis (3-5) aggregatis, superficialibus, rigidis, atris, hemisphaericis, glabris, nitidulis 300-500  $\mu$  diam., ostiolo papilliformi, subiculo nullo; ascis jam resorptis; sporidiis dolichosporis, rectis v. leniter inaequilateris, utrinque obtusis, continuis, fuscis,  $21-35 \approx 7-9$ .

Hab, in culmis emortuis Phragmitis Karkae (Graminaceae), Cabancalan, Negros, ins. Philippin. (E. D. MERRILL). - Ros. sublimbatae (Dur. et Mont.) Pass, proxima sed sporis longioribus et angustioribus diversa.

13. Rosellinia fusco-maculans Rehm, Ascomyc. Philipp. IV, Leaflets of 603 Philipp. Botany, VI (1913) p. 1937. - Peritheciis in maculis primitus discoidalibus 3-5 mm. latis, demum late confluentibus, fusco nigricantibus, ex hyphis ramosissimis fuscis 2 p. latis contextis plus minusve gregariis, sessilibus, interdum dispersis, saepius pluribus stromatice arcte congregatis, globulosis, minutissime papillatis, nigro-fuscidulis, subcarbonaceo-contextis, scabris, 300-350 µ latis; ascis evanidis; sporidiis ellipsoideis, utrinque obtusis, 1-cellularibus, fuscis,  $10 \times 5.6$ .

Hab. in Schrizostachy o emortuo (Graminaceae), Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (G. L. EVARISTO).

14. Rosellinia (Tassiella) crustacea Rehm. Ascom. Philippin. VIII, in 6032 Leafit, of Philippin. Bot. VIII, 1916, p. 2941. — Perithecia gregaria, mycelio late explanato fusco nigritulo, innata ab eoque obtecta, emergentia, conoidea vel hemisphaerica, minute papillulata, extus verrucosula crasse fusce tunicata, 2-2,5 mm. lata senilia umbilicata; ascis evanidis; sporis fusiformibus utrinque obtusis, rectis, obscure fuscis, 1-cellularibus,  $70 \approx 25$ .

Hab. ad calamos vivos Schizostachyi (Graminaceae), Los Baños, Ins. Philipp. (S. et Reyes). — Quoad perithecia emergentia sporasque valde appropinquans ad Rosell. emergentem (B. et Br.) Sacc.

15. Rosellinia rhacodioides Sacc., Bull. Soc. Bot. it. 1913, p. 151, Ann. 6033 Mycol. XI, 1913 p. 565. — Peritheciis subiculo rhacodiaceo nigro 10-12 mm. extenso insertis, hinc inde aggregatis, superficialibus globoso-depressis, exiguis, opace nigris, 160-180 μ diam. obtuse papillatis; subiculi hyphis densis, filiformibus, praelongis, 4-5 μ cr., parce ramosis, remote septatis, non constrictis, atrofuligineis; contextu celluloso, atro-fuligineo; ascis... jam resorptis; sporidiis ellipsoideis utrinque rotundatis v. basi nonnihil rotundato-tenuatis,  $8-8.5 \times 5.6-7$ , rarius  $9.5 \times 8$ , atrofuligineis, rectis.

Hab. in vaginis basilaribus culmi emortui Stipae tenaciss i m a e (Graminaceae), Tripolitania (Garian: Bu Gheilan). Subiculo rhacodiaceo, peritheciis ratione minutis et matrice facile dignoscenda species, etsi asci hucusque non visi.

16. Rosellinia affinis Sacc., Ann. Mycol. XI, 1913, p. 314.— Perithe- 6034 ciis gregariis subgloboso-hemisphaericis, basi cortice leviter insculp-

tis, nigricantibus, subopacis, 0,5-0,7 mm, diam., carbonaceis, glabris ostiolo punctiformi in centro areolae circularis 200-300  $\mu$  latae param distinctae sito ; ascis cylindricis, apice rotundatis, octosporis, 65-70 \* 4-5, parte sporif, in stipitem filiformem 28-30 \* 2,5-3, raro longiorem tenuatis, paraphysibus filiformibus, 1,7-2  $\mu$  cr. minute guttulatis obvallatis ; sporidiis oblique monostichis, ellipsoideo-oblongis, 8,5-9,5 \* 4,2-5, utrinque rotundatis, pro more rectis, initio 1-2-guttulatis, dein eguttulatis, fuligineis.

Hab. in ramis corticatis emortuis Litseae glaucae (Lauraceae), prov. Mino, Kawauye, Japoniae (HARA). — Affinis Ros. areolatae, sed perithecia et sporidia minora, areola minus distincta etc.

17. Rosellinia Cladoniae (Anzi). — Sace. Syll. I p. 275. — Var. floer-6035 keana Vouaux ap. Harmand, Lich. Fr. p. 335, et in Bull. Soc. Mycol. 1912, p. 205. — A typo differt sporidis longioribus et angustioribus, 22-41 \* 6-13.

Hab. in podetiis Cladoniae Floerkeanae var. careatae (Lichenes), in alpibus Vogensibus, Gallia (HARMAND).

18. Rosellinia steineriana Keissler, Beih. d. Bot. Centralbl., Bd. 37., 6036 II Abt., 1920, p. 273. — Peritheciis numerosissimis, totum fere thallum tegentibus, superficialibus, subglobosis, laevibus, atris, mycelio visibili destitutis, ca. 500 μ diam., 30 μ crassis, contextu parenchymatico (cellulis parvis); ascis cylindraceis, membrana tenui circumdatis, apice rotundis, non stipitatis, 6-8-sporis, ca. 60-65 × 9-10, basim versus quasi hypothecio subbrunneo instructis; paraphysibus filiformibus, hyalinis, liberis, rectis, non ramosis, eguttulatis, apice leviter attenuatis, septatis (cellulis ca. 6-9 μ longis) ascos superantibus, ca. 2,5-3 μ latis; sporidiis plerumque globosis (interdum ellipsoideis vel ovoideis), brunneo-nigris, eguttulatis (interdum sporidiis globosis 1-ellipsoideis ovoideisve 3-guttulatis) 1-seriatis, totum ascum explentibus, membrana crassiuscula instructis, ca. 8-9 × 8-9 (vel interdum ca. 12 × 8). — J + intense coerulescens (paraphyses et earum mucum, non ascos); K —.

Hab. in thallo Lecanorae solarinoidis St. (Lichenes), in silva ad lacum parvum super. Giökköl, 1800 m. alt. in Caucaso (A. B. Schelboonikow).

19. Rosellinia romana Sacc., Ann. Mycol. X, 1912, p. 316.— Peritheciis 6037 superficialibus, plus minus dense gregariis, globosis, obtusiuscule papillatis, carbonaceis, opace nigris, glabris, 0,7-1 mm. diam.; ascis cylindraceis, apice obtusis obturaculoque praeditis, deorsum longiuscule sensim pedicellatis, p. sp. 80-85 × 10-12, stipite 40 μ longo;

paraphysibus filiformibus copiosis; sporidiis octonis oblique monostichis oblongo-ellipsoideis utrinque subrotundatis,  $13\cdot15 \approx 7$ , fuligineis, utrinque appendiculis hyalinis papilliformibus vix  $3\cdot3,5 \approx 2$  auctis.

Hab. in caule emortuo Rusci acule ati (Liliaceae), Marino pr. Romam, Italia centr. (D. SACCARDO). — Affinis Ros. mammiformi et Ros. mastoideae, a prima sporidiis brevissime apiculatis, ab altera sporidiis non omnino muticis imprimis dignoscitur — Rosellinia mastoidea Sacc., optime evoluta, iterum lecta est in ramis Rubi fruticosi emortuis, S. Stefano del Comelico (Italia bor.) (D. SACCARDO).

20. Rosellinia megalosperma Syd., Enum. Philipp. Fungi II, in Philipp. Journ. of Sci. VIII (1913) p. 485.— Peritheciis solitariis vel paucis aut compluribus aggregatis, subiculo omnino destitutis, superficialibus vel basi applanata paullo immersis, semiglobosis vel parum elongatis, glabris, levibus, atris, ostiolo minuto papilliformi nitenti praeditis, carbonaceis, ca. 1 mm. altis, 700-900 μ latis; ascis clavatis, apice rotundatis, 150-180 × 20-28, paraphysatis; sporidiis distichis vel raro subtristichis, oblongis, utrinque lenissime attenuatis, sed apicibus plerumque obtusis, continuis, fuligineofuscis, 45-88 × 12-16.

Hab. in ramulis emortuis Strebli asperis (Moraceae), Luzon, Manila, ins. Philipp. (MERRILL).

21. Rosellinia (Coniochaeta) Raimundi Sacc., Notae Myc. XXIII (Accad. Veneto-trent. 1917 p. 67). — Peritheciis dense gregariis superficialibus, globoso-conoideis, obtuse papillatis, fusco-nigris, 300 μ diam. pilosis; setulis remotiusculis filiformibus, subtortuosis 40-80 \* 4, fuligineis, obsolete septatis; ascis jam resorptis; sporidiis ex ellipsoideo coffeacformibus, 10 × 7, e latere 5-6 μ cr. fuligineis, eguttatis.

Hab. in ramis emortuis Averrhoae Tilimbi (Oxalidaceae), Los Baños, Ins. Philipp. (M. B. RAIMUNDO, comm. BAKER).—Affinis Ros. ambiguae Sacc., dignoscitur peritheciis duplo majoribus, fusco-nigris, non aterrimis, setulis longioribus parce septatis, sporidiis non guttatis.

22. Rosellinia Cocoës P. Henn. - Syll. XXII p. 110.

Hab. in truncis putrescentibus Arengae mindorensis (Palmae), Los Baños, Ins. Philipp.; in truncis Arengae sacchariferae, Los Baños; in foliis Livistonae (Palmae), ex M. Maquiling, Ins. Philipp. (BAKER) est forte hujus spec. forma

minor foliicola; sed specimina sterilia (sec. Saccardo, Notae Myc. XXIII, 1917).

23. Rosellinia ambigens Sace., Notae Mycol. XXIV p. 5 (Bull. R. Orto 6041 bot. Nap. 1918). — Peritheciis hine inde approximato-seriatis (seriebus 3-15 mm. long.), globosis, basi folio profunde insculptis et epidermide longitudinaliter nigrificata lacinulata cinctis, superne nudatis, glabris, atro-nitidulis, breviter papillatis, carbonaceis, 350-400 μ diam.; ascis jam resorptis; sporidiis ovato-oblongis, coffeiformibus, utrinque obtusulis, 9-10 × 4,5-5 fuligineis.

Hab. in foliis emortuis Demonoropis sp. (Palmae), in Horto bot. Singapore (Baker). — Ob perithecia primo subcutanea dein emersa species inter Rosclliniam et Anthostomellam ambigit.

24. Rosellinia Alchemillae A. L. Smith, Trans. Br. Mycol. Soc. V (1916) 6042 p. 239. — Peritheciis sparsis vel gregariis, atris, opacis et carbonaceis, epiphyllis, erumpentibus, late globoso-conicis, levibus, ad basim 300-350 μ vel interdum valde minoribus, 50-70 μ, papillatis, poro tandem lato pertusis; paraphysibus gracilibus, interne granulosis, contortis, ascos superantibus; ascis cylindraceis, 100 × 10-12; sporidiis monostichis late fusiformibus, utrinque subacutis, biguttulatis, 17 × 7-8.

Hab. in foliis putridis Alchemillae alpinae (Rosaceae), Glen Falloch, Perthshire, Britannia (D. A. BOYD).

25. Rosellinia subsimilis Sacc., Mycologia, 12., 1920, p. 199. — Peri- 6043 theciis gregariis, subglobosis, minutis, nigris, glabris, 100-180 μ diam. brevissime papillatis; ascis filiformi-paraphysatis, cylindricis, subsessilibus, 89-90 × 5,5-6, 8 sporis; sporidiis oblique monostichis e cylindraceo ellipsoideo-oblongis, saepius leviter inaequilateris, ntrinque rotundatis, 12-14 × 5-6, fuligineis.

Hab. in ramis decorticatis emortuis Crataegi sp. (Rosaceae), Whitestone Gully, Dickey Count. N. D., Amer. bor. (BRENKLE).—Affinis R. rimincolae differt sporidis angustioribus subcylindraceis, etc.

26. Rosellinia pulveracea (Ehrenb.) Fuck. — Syll. I p. 264 — fm. mi-6044 crospora Sacc.— Dignoscitur sporidiis quam in typo paullo minoribus, nempe 8 × 5-6,5.— Hab. in truncis decorticatis Pruni Armenia cae (Rosaceae), Lyndonville N. Y., Amer. bor. (C. E. FAIRMAN). — Var. africana Baccarini, Fi. Etiop. II, n. 75 in Ann. Bot. 14., 1917, p. 133.— Peritheciis sparsis vel laxe gregariis rotundis, rugulosis atris ad 200 μ latis, ostiolo inconspicuo pertusis; ascis breviter pedunculatis, octosporis paraphysibus cito evanescen-

138

tibus obvallatis ( $\mu$  42-50), sporidiis ellipsoideis oblique monostichis,  $6 \times 4$ .

Hab. Assaorta, Mt. Diyot, ad ligna cariosa, Aetyopia (PAPPI).

27. Rosellinia australis Sacc. et Trott., Ann. Mycol. XI, 1913, p. 416.— 6045 Peritheciis densiuscule gregariis, omnino superficialibus, carbonaceis, opace nigris, globosis, sublevibus, 0,7-1 mm. diam., brevissime obtuse papillatis, bysso nullo sed maculis atris corticalibus saepe insertis; ascis tereti-clavatis, 110-120 × 13-15, octosporis, usque ad basim sporiferis deorsum angustato-pedicellatis, mox evanidis; sporidiis ellipsoideo-fusoideis, utrinque acutato-apiculatis, subaequilateris, primum grosse 1-guttulatis, atro-fuligineis, oblique monostichis, 17-20 × 8-10.

Hab. in caule emortuo sub arena infosso Nicotia nae glaucae (Solanaceae), Ain Zara inter et Bir Tobras, Tripolitania, Africa bor.— Pluribus affinis, sed a R. mammiformi differt sporidiis non hyalino-apiculatis, a R. mastoidea sporidiis subfusoideis, a R. rhombispora peritheciis non v. vix papillatis et sporidiis minoribus, denique a R. romana sporidiis non utrinque rotundatis.

- 28. Rosellinia Pepo Pat. Syll. XVII p. 102. Etiam in The o-6046 broma Cacao (Sterculiaceae), cui valde noxia, in Insula Trinidad Antill. (Onfr. Nowell W., in Bull. Dep. Agric. Trinidad and Tobago 1919 (1920), pp. 178-199, 5 fig.).
- 29. Rosellinia arcuata Petch, Rev. Ceylon Fungi, Ann. R. Bot. Gard. 6047 Peradeniya, VI, P. II, 1916, Extr. p. 23. R. bothrina B. et Br., R. aquila B. et Br., p. p. Peritheciis gregariis, primum in mycelio purpureo-brunneo immersis, fusco-brunneis, dein nigris, liberis, carbonaceis, globosis, leniter depressis, 1,5-2,4 mm. diam., levibus, ostiolo conico 0,1 mm. alto, basi 0,4 mm. er.; ascis cylindraceis  $300 \times 8$ ; sporis oblique monostichis; paraphysibus 2  $\mu$  eirc. er., ascos aequantibus; sporis nigris, cymbiformibus, apicibus acutis et saepe mox contractis,  $30\text{-}47 \times 5\text{-}7$ .

Hab. ad radices (?), Theae ae (Theaceae), etc., Ceylon.

30. Rosellinia (Tassiella) horrida Rehm, Ascom. Philipp. VIII, in Leafit. 6048 of Philipp. Bot. VIII, 1916, p. 2941. — Perithecia in basi atrata communi 3-4 cm. lata arcte congregata conjunctaque, lata basi sessilia, conoidea apice obtusa, rarissime aliquantulum applanata, mi nutissime papillulata carbonacea, nigrofusca, primitus albide pruinata, distincte verruculosa, 2-2,5 mm. alta, ad basim circiter 2 mm. lata; ascis cylindraceis, 8-sporis. Sporis fusoideis, utrinque subacutatis, 1-cellularibus, fuscis, 45-50 ≈ 10-14. Paraphyses?

Hab. ad corticem emortuum, Mt. Maquiling, Ins. Philipp. (C. F. BAKER). — A Ros. lamprostoma Syd. peritheciis plurimis arcte juxtapositis in papillulam protractis plane divergens.

31. Rosellinia umbilicata Sacc., Ann. Mycolog. XII, 1914, p. 304. — 6049 Peritheciis laxe gregariis, superficialibus, carbonaceis depresse globosis, mox subdiscoideis et umbilicatis, centro obtuse breviterque papillatis, nigris, 0,5-0,7 mm. diam., ascis cylindraceis, apice rotundatis, brevissime crasseque stipitatis, 80-90 × 11-12, crassiuscule paraphysatis, octosporis; sporidiis monostichis, v. partim subdistichis, 11,5-16 × 9-10, elliptico-ovoideis, utrinque rotundatis, eguttatis, fuligineis, levibus.

Hab. in cortice emortuo indeterm., prov. Nueva Vizcaya, Luzon, Ins. Philippin. (C. Mc Greger). — Imprimis forma peritheciorum distinguenda species.

32. Rosellinia lamprostoma Syd., Enum. Philipp. Fungi I, in Philipp. 6050 Journ. of Sci. VIII (1913) p. 273. — Peritheciis sparsis vel laxe gregariis, superficialibus, levibus, glabris, e basi lata conoideis, atris, opacis, nitide papillatis, basi 0,75-1 mm. latis, 0,75-1,25 mm. altis, subiculo nullo; ascis cylindraceis, breviter stipitatis 150-200 × 15-17, octosporis; paraphysibus non visis; sporidiis oblique monostichis, oblongo-fusoideis vel navicularibus, utrinque acutis, fuligineis, continuis, 38-52 × 8-12.

Hab. in ramis emortuis, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. — Affinis R. decipienti Penz. et Sacc., a qua differt peritheciis conoideis, non globosis.

33. Rosellinia (Conomela) maquilingiana Rehm, Ascom. Philippin. VIII, 6051 in Leaflt. of Philippin. Bot. VIII, 1916, p. 2942. — Perithecia, in plaga lata nigrescente conferta, sessilia conoidea, primitus acute papillulata poro vix perspicuo pertusa glabra atra carbonacea, 0,5-0,8 mm. lata et alta; ascis, evanidis; sporis ellipsoideis, interdum subcarvatis 1-cellularibus fuscis, 15 × 6-7.

Hab. ab ramum corticatum deciduum, Mt. Maquiling, Ins. Philipp. (S. A. Reyes). — Pertinet ad seriem Ros. pulveraceae Ehrh. peritheciis conoideis, acute papillatis diversa, item a R. bogoriensi P. Henn. peritheciis conoideis, sporis non obtusis.

Rosellinia moelleriana P. Henn. — Syll. XVII p. 599 — fm. dispersa 6052
 Rehm, Ascomyc. Philipp. IV, Leaflets of Philipp. Botany, VI (1913)
 p. 1937. — A typo differt tantum peritheciis sparsis.

Hab. ad ramos emortuos deciduos, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (M. B. RAIMUNDO). — Sporidia 12 \* 5-6 (in

specie henningsiana  $6.7 \times 3,5$ ).

35. Rosellinia somala Baccarini, Eumyc. Somalia it., in « Missione Ste-6053 fanini Paoli », Firenze 1916, p. 195.— Peritheciis sparsis, basi cortice immersis globosis,  $^2/_3$  mm. diam. mammillatis, ostiolo papillato conico praeditis atris, ascis cylindraceis 145  $\mu$  longis (pars sp. 90  $\mu$ ) 10-11 latis, membrana cito evanida paraphysibus filiformibus obvallatis, sporidiis ellipsoideis vel oblongo-ellipsoideis, monostichis atris, uniguttulatis, 19-22 » 1,2-7,5.

Hab. in ramis emortuis corticatis arbusti ignoti, Gololònle, Somalia it., Africa trop. (Paoli). — Ros. mastoideae proxima sed ascis longioribus peritheciis basi cortice immersis distincta.

36. Rosellinia truncata Sydow, Philipp. Journ. of Sc. Sect. Bot. v. 9. 6054 n. 2, 1914, p. 166.— Peritheciis in glomerulos irregulares 2-5 mm. longos vel confluendo majores sine ordine denseque dispositis, rarius solitariis, subiculo copioso crasso persistenti ex hyphis fuscis septatis 3-5 μ crassis composito insidentibus, globoso-conicis, in maturitate ad verticem distincte truncatis ibique subinde etiam leniter depressis, distincte nitideque papillatis, ca. 1 mm. diam. subinde binis connatis et fere confluentibus, atris, glabris, levibus; ascis jam resorptis; sporidiis oblongis, utrinque rotundatis, continuis, fuscis, 5-17 μ longis, 7,5-8,5 μ latis.

Hab. ad ramos emortuos, Palawan Taytay, Ins. Philipp. (MER-RILL).

37. Rosellinia apiahyana Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 6055 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 99. — Peritheciis mediocribus, 500-750 μ diam., superficialibus basi vix substrato leniter infossis, solitariis v. laxe gregariis rarius hinc inde subconstipatis, stromate semper omnino destitutis, globosis non v. vix depressis eximie minuteque papillato-ostiolatis, levibus, nigris, opacis v. vix subnitidulis, parietibus crassiusculis subfragilibus carbonaceis; ascis non visis; sporidiis subellipsoideo-navicularibus, subparvis, 10-12 × 3,4, 1-2-guttulatis, levibus, fuligineis, pellucidis.

Hab. in ramis decorticatis putrescentibus in silvis prope Apiahy, Brasilia, America austr.

38. Rosellinia asperata Mass. m. s. in Herb. Kew in Wakefield, Bull. 6056 Misc. Inf. Kew, 1918, p. 209, cum icon.—Subiculo late effuso, pannoso-crustaceo, fusco-brunneo; peritheciis conoideis 0,75-1 mm. diam. 1 mm. altis, subiculo primo tectis, dein semi-immersis, villoso-asperis, ostiolo conico atro-nitente; ascis jam diffluentibus; sporidiis fuscis, fusoideis v. cymbiformibus, utrinque acutis, 50-60 × 7,5-8.

Hab. in ligno putri, Horto Botanico « Gold Coast », Africa trop. (W. H. Johnson). — Habitu R. bothrinae B. et Br. et R. arenatae Petch affinis sed sporidis majoribus diversa.

39. Rosellinia bakeriana Sacc., Notae Mycol XXIII p. 66 (Accad. Veneto-trent. 1917). — Peritheciis laxe gregariis e basi lata leviter infossa superficialibus, globosis, breviter nigro-papillatis, 350-400 μ diam., junioribus atro-olivaceis levissime velutinis, demum nigricantibus; indumento e pruina, non ex pilis formato; contextu pachydermatico dense celluloso, nigricante; ascis cylindraceis, apice rotundatis, deorsum tenuatis, octosporis, 60-70 × 7-7,5; sporidiis oblique monostichis, ovato-oblongis, leviter inaequilateris, utrinque obtusulis, 11 × 5,5-6, fuligineis; paraphysibus copiosis, dilute ochraceis.

Hab. in ligno decorticato putrescenti speciei indet., M. Maquiling, Ins. Philipp. (BAKER).

40. Rosellinia Merrillii Syd., Enum. Philipp. Fungi II, in Philipp. 6058 Journ. of Sci. VIII (1913) p. 485.— Peritheciis gregariis vel dense confertis, plagulas longe lateque effusas formantibus e subiculo adnato, tomentoso, denso, atro-fusco, ex hyphis fuscis septatis 3-3,5 μ cr. composito, persistenti emergentibus, globosis, firmis, 1 mm. diam., glabris, in parte inferiore minute rugulosis, superiore parte levibus, opace atris, distincte papillatis; ascis teretibus, 170-230 × 12-14, octosporis; sporidiis monostichis, ellipsoideo-fusoideis, utrinque subobtusis, continuis, obscure brunneis, 25-30 × 9-11.

Hab. in ramis decorticatis, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (MERRILL). — Affinis R. aquilae (Fr.) De Not., sed sporidis majoribus.

41. Rosellinia perusensis P. Henn., Hedw. vol. 48 (1908) p. 10.— Pe-6059 ritheciis plerumque caespitosis, innato superficialibus, subglobosis, atro-carbonaceis, conico-ostiolatis, 600-800 μ diam.; ascis cylindraceis, obtusis, octosporis, paraphysatis, 70-80 \* 4-5; sporidiis oblique monostichis, ovoideis vel ellipsoideis, atris, 1-2-guttulatis, 6-10 \* 3,5-4,5.

Hab. ad lignum decorticatum, Perùs, S. Paulo, Brasilia.

CUCURBITARIELLA Petrak, Ann. Mycol. 14., 1916, p. 441.— Perithecia byssiseda, caespitosa.

1. Cucurbitariella moravica Petrak, l. c. — Peritheciis subiculo dema 6060 tiaceo nigrescente plus minusve immersis, caespitosis, plerumque 6-20 dense aggregatis, primum epidermide tectis, demum erumpen-

tibus coriaceis, nigris, globosis vertice plus minus impressis, 500-750  $\mu$  diam., ostiolis breviter conicis, pertusis ; ascis cylindraceis, crassiuscule stipitatis, apice rotundatis, basim versus sensim sed parum tenuatis, 140-160  $\approx$  10-15, p. sporif. 84-100  $\mu$  longa ; sporidiis ellipsoideis v. ovoideis, raro oblongis v. fere globosis, utrinque rotundatis, grosse 1-2-guttatis, fusco-olivaceis, 14-18  $\approx$  10-12.

Hab. in ramis emortuis Pruni spinosae (Rosaceae), prope pagum Usti circa Mühr.-Weisskirchen, Moraviae. — Novum genus a Rosellinia distingueretur peritheciis caespitosis subiculo subimmersis, et tunc cum gen. Cucurbitula Fuck. (Syll. I p. 274, ut Sectio Roselliniae) comparandum.

- LASIOSORDARIOPSIS J. E. Chenantais, Bull. Soc. Mycol. de Fr., XXXV, 6061 1919, p. 73, 77.— Sporidia denique opaca, sine spiculis (hucusque).— Huc ducandae scunt sec. J. E. CHENANTAIS, Rosellinia sylvana Sacc., et Bombardia comata.
- PUTTEMANSIELLA P. Henn., Hedw. vol. 48. (1908) p. 10.— Etym. a Cl. PUTTEMANS. — Perithecia coriacea, superficialia, ostiolata. Asci clavati octospori paraphysati. Sporidia subglobosa vel ellipsoidea, continua, colorata. — A gen. Rosellinia videtur differre peritheciis coriaceis.
- 1. Puttemansiella Desmodii P. Henn., l. c. p. 10.— Peritheciis superficia-6062 libus, gregariis, saepe confluentibus, coriaceis, subglobosis, ostiolatis, dein collabentibus, fulvis, pruinoso-subtomentosulis, 0,5-0,8 mm. diam.; ascis elavatis, apice rotundatis v. applanatis, octosporis, paraphysatis, 70-110 × 2030; sporidiis subdistichis, sphaeroideis, ellipsoideis v. ovoideis, atro-brunneis, continuis, 20-24 × 15-20.

Hab. in ramulis Desmodii lejocarpi (Leguminosae), Serra da Cantareira, S. Paulo, Brasilia.

- MICROASCUS Zukal.— Syll. IX p. 483, XI p. 279, XVI p. 1129, XVII p. 610.
- 1. Microascus setifer Alfr. Schmidt, Copr. Pilze Schles. Bresl. 1912, 6063 p. 30. Peritheciis solitariis, initio semimmersis, demum superficialibus, nigris, deorsum glabris, circa ostiolum setis simplicibus, crebris, rigidis, brunneis apice dilutioribus, 40 μ longis vestitis, globosis 120-180 μ lat., ostiolo nunc breviter papillato, nunc conoideo, nunc cylindraceo praeditis; contextu subolivaceo v. nigricante, impellucido, membranaceo, indistincte parenchymatico, cellulis

 $6.7\,\mu$  diam; ascis piriformibus v. ovoideis, sessilibus facile diffiuis,  $21\text{-}23 \times 13,5\text{-}15,5$ , octosporis; sporidiis conglobatis elliptico fusoideis, utrinque obtuse tenuatis, hyalinis dein flavido-brunneis flavoque guttulatis, coacervatis rubro-brunneis,  $10,5\text{-}11,5 \times 5,8$ .

Hab. ex aere in fimum equinum dilapsus, Breslau, Silesiae; inde in laboratorio cultus.

- \*) CHAETOMIUM Kunze.— Syll. I p. 220, IX p. 484, XI p. 279, XIV p. 490, XVI p. 428, XVII p. 600, XXII p. 114.
- 1. Chaetomium fiscicolum Petrak, Ann. Mycol. XIII, 1915, p. 45; Fl. 6064
  Boh. et Mor. exs. II Ser. 1 n. 1101.— Peritheciis in ramulis luteo
  albido-mucosis et contextis sparsis vel subgregatis, basi hyphis numerosissimis valde contextis, apice glabrescentibus, globulosis, plus
  minusve compressis, haud papillulatis, poro vix conspicuo pertusis
  membranaceis, pallide olivaceo-fuscis, 0,5-0,6 mm. diam.; ascis cylindraceis, apice rotundatis breviter stipitatis, basim versus paullum attenuatis, tenuissimis valde caducis, 140-180 × 14-16, octosporis, aparaphysatis; sporidiis mono-vel subdistichis, fuscis, ellipsoideis vel ovatis, apice acutatis, basi saepe appendicem brevissimam hyalinam fere conicam acutatam gerentibus, 20-32 × 13-16, interdum guttulas 1-3 includentibus.

Hab, in ramulis putrescentibus decorticatis Salie is sp. (Salicaceae), « Mähr.-Weisskirchen », Moraviae orientalis.

2. Chaetomium Fieberi Corda — Syll. I p. 223, IX p. 485 — Var. rufi- 6065 pilum (Grove) Sacc. — Chaet. chlorinum var. rufipilum Grove in Journ. of Bot. L (1912) p. 47. — Peritheciis ovatis vel lageniformibus, 0,5-1 mm. altis, atris, acutis, vertice junioribus glabratis, alibi pilis simplicibus, tenuibus, leviter flexuosis, 5 μ cr. vestitis; pilis primo olivaceo-brunneis dein roseo rufis, non opacis, asperulis, tenuiter parceque septulatis, superne dilutioribus et angustioribus, senio longissimis, tortuosis, intricate intertextis et perithecia obtegentibus; ascis clavatis, pedicellatis, paraphysibus non visis; sporidiis, octonis, distichis vel apice conglobatis, limoniformibus, ex hyalino fuligineis, 15 × 10.

Hab. in caulibus Heraelei (Umbelliferae), Hunnington Ws. in Britannia, sociis Ch. chlorinum et Ch. comatum a quibus pilis rufis mox distinctum.

<sup>\*)</sup> Cfr. Chivers A. H., A Monograph of the Genera Chaetomium and Ascotricha, in Memoirs of the Torr. Bot. Cl. XIV n. 3 (1915), tabulis 12 eximits illustrata.

3. Chaetomium aureum Chivers, Proc. Acad. Arts and Sci. XLVIII 606 (1912) p. 86; Monogr. Chaetomium p. 174, tab. 11 fig. 12-17 (1915).— Griseum, pallide-olivaceum, lutescens, demum aureo-flavum; peritheciis minutis, globosis, 110-140 \* 105-123, cirrhis instructis, pilis lateralibus numerosis, tenuibus, rectis vel flexuosis, regulariter et distincte septatis, olivaceo-flavis, asperulis vestitis; pilis terminalibus olivaceo-flavis, regulariter septatis, asperulis vestitis, arcuatis, apice subrectis vel incurvatis; ascis clavatis, octosporis, 42 \* 10, p. sporif. 26 μ; sporidiis olivaceo-brunneis, irregulariter ovatis, utrinque apiculatis, 9,4-11 \* 4,7-5,6.

Hab. in charta, fimo, etc. in Nova Anglia nec non in culturis chartae vetustae ex Java (Thanter).— Affine Ch. trilaterali et Ch. fusiformi sed notis variis, imprimis ob sporidia in cirrhos longos atros expulsa et ob pilos apicales tantum arcuatos, non spiraliter convolutos distinctum.

4. Chaetomium convolutum Chivers, Proc. Amer. Acad. Arts and Sci. 6067 XLVIII (1912) p. 85; Monogr. Chaetomium p. 173, tab. 14 fig. 9-12 (1915). — Gyano-griseum; peritheciis magnitudine mediis, globosis (236-254 × 224-240), cirrhis instructis; pilis lateralibus paucis, gracilibus, rectis, regulariter et distincte septatis, basi olivaceo-flavis, asperulis apice hyalinis, et sparse asperulis; pilis terminalibus undique asperulis vestitis, olivaceo-atris, subcontinuis vel irregulariter pauciseptatis, 8-10 spiraliter convolutis, ad ipsam apicem convolutionibus terminalibus regulariter successive minoribus; ascis clavatis, octosporis, 56,4 × 10, p. sporif. 27,4 μ; sporidiis pallide olivaceis, ovatis vel limoniformibus, utrinque obtusis, subapiculatis, 8-8,4 × 6,4, e latere 5-5,5 μ erassis.

Hab. cultum in fimo murino e Germania.

5. Chaetomium subspirale Chivers, Proc. Amer. Acad. Arts and Sci. 6068 XLVIII (1912) p. 84; Monogr. Chaetomium p. 173, tab. 13 fig. 12-17 (1915).— Griseum vel roseo-griseum; peritheciis majoribus, longioribus, 300-337 × 206-224, sporidia irregulariter conglobata gerentibus; pilis lateralibus numerosis, tenuibus, regulariter et distincte septatis, levibus, basi rectis, apice arcte spiraliter convolutis; pilis terminalibus tenuibus, obscure septatis, pallide-olivaceis, levibus, primum arcte dein laxe spiraliter convolutis; ascis clavatis, octosporis, 45 × 9,7, p. sporif. 24 μ; sporidiis subdistichis, pallide olivaceis, limoniformibus, utrinque apiculatis, 6,4 × 5,2-5,6.

Hab. in culturis substantiarum variarum ex Nova Anglia, Hollandia et America australi — Ob characteres pilorum a caeteris

speciebus distincta.

6. Chaetomium sphaerale Chivers, Proc. Amer. Acad. Arts and Sci. 6068 XLVIII (1912) p. 84; Monogr. Chaetomium p. 189, tab. 11 fig. 18-23 (1915) - Grisco-flavus, olivacco flavus, actate aureo-flavus; peritheciis majoribus, subglobosis, basi rotundatis, apice subconstrictis, 300-329 \* 262-300, sporidia regulariter conglobata gerentibus vel cirrhis instructis; pilis lateralibus numerosis gracilibus, levibus, regulariter et distincte septatis successive olivaceis, aureoflavis, pallide flavis, hyalinis, apice collabentibus, aliis subrectis, longioribus, 1-2-ramosis, basi 3,7 μ diam., aliis flexuosis, brevioribus, non ramosis, basi 2,8 μ diam.; pilis terminalibus longis, gracilibus, pilis lateralibus concoloribus, levibus, irregulariter flexuosis vel subspiraliter convolutis, 1-5-ramosis, basi distincte septatis, apice obscure septatis vel subcontinuis; ascis clavatis, octosporis, 48 \* 13, p. sporif. 26 μ; sporidiis subdistichis, dense olivaceo-brunneis, utrinque umbonatis, limoniformibus,  $7,3-8,1 \le 6,4$ .

Hab. in cultura larvarum insectorum ex Reading, Mass., Amer. bor. — Ob perithecii formam praecipue distinctum.

7. Chactomium quadrangulatum Chivers, Proc. Amer. Acad. Arts and 6070 Sci. XLVIII (1912) p. 85; Monogr. Chaetomium p. 202, tab. 14 fig. 1-8 (1915). — Griseum; peritheciis majoribus, longioribus, 333-456 \* 243-350, cirrhis longissimis instructis; pilis lateralibus numerosis, tenuibus, rectis, regulariter et distincte septatis, basi olivaceo-fuscis, asperulis vestitis, apice hyalinis, levibus; pilis terminalibus biformibus, aliis spiraliter convolutis, irregulariter pauciseptatis, asperulis vestitis, basi olivaceo-brunneis vel atris, apice dilute coloratis, aliis subrectis, undulatis vel convolutis, irregulariter pauciseptatis, asperulis vestitis, ramosis, basi olivaceo-brunneis vel atris, apice dilute coloratis; ascis clavatis, octosporis, 39 \* 9,7 p. sporif. 21 μ; sporidiis pallide olivaceis, a fronte visis subquadrangulatis, a latere ovatis,  $6.4-8 \times 5.6-6.4$ .

Hab. cultura in fimo ex Cambridge Mass., Amer. bor. nec non ex Chile et insula Little Swan in sinu Mexici (R. Thanter). — Ob formam sporidiorum facile dignoscendum.

8. Chaetomium fusiforme Chivers, Proc. Amer. Acad. Arts and Sci. 6071 XLVIII (1912) p. 87; Monogr. Chaetom. p. 175, tab. 11 fig. 7-11 (1915). — Griseum vel pallide olivaceum; peritheciis minutis, subglobosis 116-123 > 101-125, cirrhis carentibus; pilis lateralibus numerosis, tenuibus, flexuosis, regulariter et distincte septatis, olivaceo-Lavis, asperulis vestitis; pilis terminalibus crassioribus, aspe-

rulis vestitis, olivaceo-brunneis, regulariter et distincte septatis, arcuatis, apice circinantibus vel subconvolutis; ascis clavatis, octosporis,  $48 \times 11$ , p. sporif.  $32~\mu$ ; sporidiis laete olivaceo-flavis, vel olivaceo-brunneis, longis, angustis, subfusiformibus, apice rotundatis vel apiculatis,  $15 \cdot 16 \times 4.8~5$ .

Hab. in charta, Alabama, Amer. bor. (R. Thanter) — Ob sporidia elongata, angusta, a caeteris speciebus bene distincta.

9. Chaetomium trilaterale Chivers, Proc. Amer. Acad. Arts and Sci. 6072 XLVIII (1912) p. 87; Monogr. Chaetomium p. 175, tab. 11 fig. 1-6 (1915).— Olivaceo-flavum; peritheciis minutis, subglobosis, 100-110 × 90-97, cirrhis carentibus; pilis lateralibus numerosis, gracilibus, longioribus, regulariter et distincte septatis, aureo-flavis, basi rectis asperulis vestitis, apice 1-3 spiraliter convolutis, levibus; pilis terminalibus irregulariter septatis, olivaceo-brunneis, asperulis vestitis, arcuatis, apice 1-3 spiraliter convolutis; ascis clavatis, octosporis, 50 × 9-5, p. sp. 26 μ longa; sporidiis subdistichis, forma sphaerae-sectoris praeditis, utrinque subapiculatis, laete olivaceo-flavis, 9-9,7 × 5,2-6.

Hab. in charta ex Nova Anglia (THAXTER). — Affine Ch. aureo et Ch. fusiforme sed notis variis distinctum.

10. Chaetomium ampullare Chivers, Proc. Amer. Acad. Arts and Sci. 6073 XLVIII (1912) p. 86; Monogr. Chaetom. p. 187 tab. 10 fig. 8-12 (1915). — Ochraceum; peritheciis majoribus, longissimis, 450-530 × 135-165, sporidia irregulariter conglobata gerentibus; pilis lateralibus paucis, gracilibus, regulariter et distincte septatis, basi rectis, olivaceo-fuscis, asperulis, apice collabentibus levibus; pilis terminalibus longis, gracilibus, distincte et regulariter septatis, successive aureo-brunneis, aureo-flavis, hyalinis, levibus, ramosis, in fila hyalina elongatis; ascis clavatis, octosporis, 45 × 9,7, p. sp. 23 μ; sporidiis subdistichis, laete olivaceo-flavis, utrinque umbonatis, limoniformibus, 8,1-8,9 × 6,4.

Hab. in cultura telae velarum, ex Lowell, Mass., Amer. bor. et in fimo ex North Carolina, Amer. bor. (Thanter). — Ob perithecia insolite elongata et ob pilorum terminalium structura facile dignoscendum.

11. Chaetomium spinosum Chivers, Proc. Amer. Acad. Arts and Sci. 6074 XLVIII (1912) p. 86; Monogr. Chaetom. p. 187, tab. 10 fig. 1-7 (1915). — Aureo-flavum; peritheciis magnitudine mediis, subglobosis, 290 × 225 circ., cirrhis instructis; pilis lateralibus numerosis, rectis, rigidis, acutis, irregulariter et parum distincte septatis, basi

atro-badiis, asperulis, apice hyalinis levibus; pilis terminalibus rectis. rigidis, acutis, asperis, ramosis, ramis ramulisque dilute olivaceis; aseis clavatis, octosporis, 41 × 7-5, p. sp. 22 μ; sporidiis subdistichis, pallide olivaceis, oviformibus, 5,5-6,5 × 3,2-4.

Hab. in fimi culturis ex Buenos Aires (THAXTER). - Sporidiis ovatis et pilis terminalibus ramosis facile dignoscenda species.

12. Chaetomium circinatum Chivers, Monogr. Chaetomium, p. 168, tab. 6075 8 fig. 1-5 (1915). - Griseo-atrum; peritheciis mediae magnitudinis, ovatis vel globosis, 270-350 × 250-340; pilis lateralibus longis, flexuosis, tenuibus, sparse et irregulariter septatis, basi olivaceobrunneis, asperulis,  $5.6~\mu$  crassis, apice levibus, pallide olivaceis, attenuatis; pilis terminalibus obscuris, subopacis, olivaceo-brunneis vel brunneo-atris, sinuosis, 7 p crassis, basi irregulariter incrustatis, apice levibus vel vix incrustatis 2-3-circinato-incurvis; ascis irregulariter clavatis, octosporis,  $70 \times 25$ , p. sp.  $50 \mu$  longa; sporidiis ovatis vel limoniformibus, apiculatis vel umbonatis, olivaceobrunneis,  $13-15 \approx 8-10$ .

Hab. in « burlap » vetusta inter rejectamenta, Worcester, Mass., Amer. bor. — Affine Ch. murorum sed pilis terminalibus diversis. 13. Chaetomium angustum Chivers, Monogr. Chaetomium, p. 206, tab. 6076 16 fig. 6-12 (1915). — Intense olivaceo-viride; peritheciis latiusculis, subglobosis, basi angustato-obtusis, ibique rhizoidibus olivaceobrunneis vel atris copiose praeditis, 280-300 × 240 290, interdum sporularum cirrhos ferentibus; pilis lateralibus copiosis, obscure et sparse septatis, crassiusculis, teretibus, obscuris, basi olivaceobrunneis vel atris, 6,6 μ crassis, sursum pallide luteis apiceque hyalinis, vel gracilibus, olivaceo-luteis, flexuosis vel irregulariter spiraliter contortis; pilis terminalibus nune rectis, longis, acutatis, basi olivaceo-brunneis, apice subhyalinis, minute spiculosis, obscure septatis vel continuis, basi 6-7 p crassis; nunc gracilibus, inferne subrectis 3,8 µ cr., superne 5-7-spiraliter contortis, ubique asperulis, basi intense olivaceo-brunneis, sursum pallidioribus; nunc crassis, robustis, asperulis, sparse et obscure septatis, basi rectis, atro-olivaceis, 7,5 a cr., superne spiraliter flexis, initio regulariter 2-3-spiralatis, demum saepe irregulariter flexuosis et tantum prope medium 1-spiraliter-contortis ibique saepe 1-2-ramosis; ascis irregulariter clavatis, octosporis, 50 × 14, p. sp. 23 μ longa; sporidis initio hyalino-viridulis, guttulatis refringentibus repletis, demum obscure olivaceo-brunneis, limoniformibus, apiculatis vel umbonatis,  $9,5-10,5 \approx 7.3.8.$ 

Hab. in culturis fimi e Portorico.— Affine Ch. cochlioidi Palliser et Ch. globoso Kze. sed pilis apicalibus minus densis et magis polymorphis.

Chaetomium trigonosporum (March.) Chivers, Monogr. Chaetomium, 607;
 p. 156, tab. 6 fig. 6-11. — Ita vocanda Bommerella trigonospora
 March. — Syll. IX p. 487.

**SORDARIA** Ces. et De Not. — Syll. I p. 230, IX p. 487, XIV p. 492, XVI p. 430, XVII p. 601, XXII p. 119.

1. Sordaria perileuca Sacc., Notae Mycol. XXIII (Acc. Veneto-trent. 6078 1917, p. 66). — Peritheciis fimi superficie ex subiculo dealbatae semiimmersis, globosis, nigris, obtuse papillatis, 350 μ diam., membranaceo-firmulis; subiculo ex hyphis filiformibus hyalinis formato; ascis tereti-clavatis, amplis, 140-160 × 12, apice rotundatis deorsum breviter tenuato-stipitatis, fugaciter filiformi-paraphysatis, octosporis; sporidiis oblique monostichis, diu gyriniformibus, oblique candatis, hyalinis, demum superne ellipsoideis, 19-20 × 10, fuligineis.

Hab. in fimo animalis dicti « C a r a b a o », in M. Maquiling, Ins. Philipp. (BAKER). — Peritheeiis nigris in areis albis sitis species mox dignoscenda. Specimina non prorsus matura.

2. Sordaria argentinensis Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6079 Buenos Aires XXIII p. 49 (1912). — Peritheciis immersis vel, rarius, semiimmersis, e globoso-lageniformibus, 300-500 μ diam., membranaceo-carnosulis, atris, glabris, contextu indistincto, ostiolo crasso, obtuso, exserto coronatis; ascis e fusoideo subclavulatis, breviter pedicellatis, 180-200 ≈ 30-40, aparaphysatis, octosporis; sporidiis ellipsoideis, antice subacutiuscule rotundatis, postice subtruncatis, atris, opacis, 30-34 ≈ 18-20, basi cauda crassa, clavulata, hyalina, 35-40 ≈ 6-8 auctis.

Hab. in fimo vetusto mulorum ad vias prope Cebollar, La Rioja: Argentina.

3. Sordaria kilimandscharica Alfr. Schmidt, Jahresb. Schles. Gesellsch. 6080 1912, p. 22. — Peritheciis sparsis, semiimmersis, nigris, globosis, sursum in collum cylindraceum, curvulum tenuatis, 830-1000 × 320-640; collis inferius longe crebreque olivaceo-setosis, sursum calvis; contextu celluloso, minute parenchymatico olivaceo, circa ostiolum nigro; ascis tereti-clavatis, apice rotundatis, deorsum sensim breviterque tenuato-stipitatis, 210 × 35, octosporis, p. sporif. 180-195 μ longa; sporidis distichis, ellipsoideis e hyalino atro-brunneis utrinque rotundatis 24-37 × 13,5-21, basi appendice cla-

vata,  $20\text{-}30 \times 7\text{-}8$ , auctis, sub apice appendice divergente dein reflexa munitis; paraphysibus tenuibus, articulatis.

Hab. in fimo muli et ovium, Burko et Moschi in Africa Orient.

4. Sordaria coronifera Grove, Journ. of Bot. LIV, 1916, p. 185, tab. 6081 542 fig. 2.— Peritheciis oblongo-conoideis, plus minusve immersis, 0,5-1 mm. altis, atris, rugulosis, saepius ostiolo majusculo nitido conico instructis, tandem glabro apice umbilicatis, at sub apice pilis 5-15 atris, acutis, 350 μ usque longis, curvulis, divergentibus, ex hyphis fasciculatis compositis coronatis, ascis clavatis, parte spor. ca. 200 × 40; sporidiis ellipsoideis vel subamygdaloideis, albidis dein fuscis, denique opacis, atris, in asco pro parte distichis, 32-40 × 18-23, primo caudis duabus hyalinis curvulis (inferiore longiore) praeditis, appendicula superiora tandem parva hemisphaerica, inferiora curvula cylindrica, ca. 15-20 × 4.

Hab. in stercore equino, Earlswood prov. Birmingham, Britannia.

5. Sordaria Burkillii Massee, Bull. Bot. Garden Kew, 1913, p. 105.— 6082 Peritheiis laxiuscule gregariis, semiimmersis, atro-olivaceis, majnsculis, 350 × 250, ostiolo cylindraceo, crassiusculo, incurvo, vertice rotundato-truncato, atro, piloso ornatis; ascis cylindraceo-clavatis, sursum obtusissime rotundatis, deorsum in pedicellum attenuatis, octosporis; sporidiis oblique monostichis, ellipsoideis, violaceo-brunneis, 28-33 × 18-20, basi cauda cylindraceo-acutata, hyalina, facile decidua auctis.

Hab. in fimo, in Horto botanico, Singapore (J. H. BURKILL).—Affinis S. communi Sacc.

6. Sordaria verruculosa Jensen, Fung. Fl. of Soil, Cornell Univ., Coll. 6083 of Agric., Bull. 315 (1912) p. 472, c. ic. (Pleurage). — Peritheciis sparsis vel gregariis, initio immersis dein subsuperficialibus, membranaceo-carbonaceis, atris, opacis. 350-750 × 225-375, pyriformisubglobosis, ostiolo conico, recto vel curvato praeditis; ascis 4-sporis, cylindricis, apice rotundatis et perforatis, basi subpedicellatis, 90-150 × 11-16; paraphysibus filiformibus, sursum attenuatis, ascos breviter superantibus, septato-articulatis; sporidiis monostichis, initio elongato-ovoideis et hyalinis, maturis subglobosis atrofuscis, 1-nucleatis, minute tuberculatis, 16-18 × 12-14, appendicula hyalina papilliformia 3-4 μ long. auctis; appendice secundaria nulla.

Hab. e solo culta, Ithaca N. Y., Amer. bor.

7. Sordaria hydrophila (W. Kirschst.) Sacc., Bertia hydrophila W. Kir-6084

schst., Krypt. Fl. Brandenb., VII (1911) p. 184, fig. 5 (p. 170). — Peritheciis sparsis vel pauci-gregariis, plerumque ab initio superficialibus, longe ovoideis, in ostiolum acutatum vel obtusum, rectum vel parum obliquum attenuatis, 1-mm. altis, 400  $\mu$  latis, contextu tenui, coriaceo, pilis brevibus brunneis ruvidis ornato; aseis cylindraceis, demum medio inflatulis, longe pedicellatis, sursum rotundatis et poro distincto praeditis,  $300\text{-}400 \times 10\text{-}22$ , paraphysibus filiformibus obvallatis; sporidiis monostichis vel irregulariter distichis, initio hyalinis, subcylindricis, multiguttulatis,  $60\text{-}80 \times 6$ , dein obscure brunneo-olivaceis, ellipsoideis vel piriformibus, sursum tenuatis, deorsum inflatulis, minute reticulatis, apice superiore papilla hyalina brevi, rotundata auctis, inferiore cauda cylindraceo-clavata, brunnea, plerumque 1-septata praeditis,  $22\text{-}32 \times 10\text{-}12$ , cauda  $33\text{-}40 \times 6\text{-}8$ .

Hab. in fragmentis vegetabilium et in ligno Alni (Betulaceae), limo immersis, Grossbehnitz in Germania.

8. Sordaria nigro-papillata (W. Kirschst.) Sacc., Bombardia nigro-papil-6085 lata W. Kirscht., Krypt. Fl. Brandenb. VII (1911) p. 184. — Peritheciis sparsis, subiculo ex hyphis luteolis, ramosis, septatis constituto insidentibus, globosis, 600 μ diam., ostiolo cylindraceo acutiusculo vel rotundato praeditis, contextu membranaceo, brunneo-olivaceo, circa ostiolum atro; ascis cylindraceis, pedicellatis, sursum rotundatis, octosporis, 200 × 15; sporidiis monostichis, ellipsoideis, brunneis, utrinque appendice hyalina, filiformi, simplici auctis (inferiore sporam superante), 18-24 × 10-12; paraphysibus copiosis, filiformibus, septatis, ascos superantibus.

Hab. in ligno quercino (Fagaceae), putrescente Rathenow, Germania.

9. Sordaria oryzeti Sacc., Notae Mycol. XX, Nuovo Giorn. bot. it. 23., 6086 1916, p. 201. — Peritheciis hine inde dense gregariis, superficialibus, e basi applanata conico papillatis, glabris et subiculo carentibus, membranaceo-carbonaceis, 0,5 mm. diam., nigris, subinde nitidulis; ascis tereti-fusoideis, apice rotundatis v. obtusis, lumineque saepe bifoveolato praeditis, 90-110 × 14-16, basi tenuatis subsessilibus, 4-8-sporis; sporidiis distichis v. oblique monostichis, ellipsoideo-oblongis, 1-guttatis, fuligineis, 20-22 × 8-8,5, apice corniculo hyalino curvulo, basique appendice oblonga, crassa, 15 × 7, subhyalina auctis.

Hab. in culmorum parte inferiore crassiore, putrescente Oryzae sativae (Graminaceae), Los Baños, Ins. Philipp. (BAKER).

10. Sordaria Musae (Maire) Sacc., Podospora Musae Maire, Bull. Soc. 6087 Hist. Nat. Afr. du Nord, 1917, p. 168. — Peritheciis gregariis v. sparsis, absque stromate, submembranaceis, nigris, oblique conicis, in rostrum longiusculum tenuatis, liberis, basi nigro-lanosis, ceterum glabris, 0,5-1 × 0,3-0,5 mm., lana basilari ex hyphis olivaceo-atris elongatis, septatis, levibus, flexuosis, 2-3 μ cr., constituta; ascis 8-sporis, subcylindraceis v. fusoideis basi longiuscule in pedicellum tenuatis, 200-250 × 15-17, aparaphysatis; sporidiis maturis 4-cellularibus, cellula superiori ellipsoidea crasse tunicata, umbrina, levi 18-20 × 12-14, apice appendice brevi hyalina 2,5 4 × 1-3 praedita, cellulis inferioribus 3 hyalinis, tenui-tunicatis, levibus, caudam cylindraceam flexuosam 30-45 × 4-5, mox evanidam.

Hab. in vaginis putrescentibus M u s a e s a p i e n t u m (Musaceae) cultae, in Mauretania, Afr. bor.

- LASIOSORDARIA J. E. Chenantais, Bull. Soc. Mycol. de Fr. XXXV, 1919, p. 73, 77. Sporidia tarde sed semper fulva, opaca, apiculata. Huc ducendae sunt sec. J. E. Chenantais species sequentes: Sordaria lignicola Fuck, coprophila C. et N., Brassicae Kl., natalitia (Speg.) Sacc., lutea E. et E., striata E. et E., botryosa P. et S., Bombardia fasciculata Fr., Lasiosphaeria luticola Feltg., ambigua Sacc.
- 1. Lasiosordaria vagans J. E. Chenantais, Bull. Soc. Mycol. de Fr., 6088 XXXV, 1919, p. 80, fig. 13. Lasiosphaeria ovina (Pers.) Ces. et De N., var. vagans Chen. Peritheciis 4-500  $\mu$  er. e globoso conoideis, confertis passimve connatis, gelatina sordida semi-immersis, tomento tenui albo, fuscescente, praeter ostiolum nigrum tectis, denique brunneis; plerumque olivaceo-fuscis, piriformibus, caespitosis, membranaceis, collabescentibus. Ascis cylindraceis subclavatis, stipitatis, globulo plasmatico sursum donatis,  $200 \times 10$ . Paraphysibus, in peritheciis nudis solum, gelatina sulfurea coalescentibus. Sporidiis octonis distichis, continuis hyalinis, granulosis, usque 35  $\mu$  long., deorsum apiculatis; sine spiculis 45-50  $\times$  4-5, quandoque versus apicem ellipsoideo-incrassatis 1-3 guttulatis, 12-15  $\times$  8-10; fuscescentibus non visis.

Hab. in trunco putrescente F a g i (Fagaceae), sepulto in pascuis, Bagatelle propè Morlaix. Finistère, Gallia.

PHILOCOPRA Speg. — Syll. I p. 249, IX p. 494, XVI p. 434, XVII p. 606.

1. Philocopra millespora Alfr. Schmidt, Jahresb. Schles. Gesellsch. 1912, 608 p. 24. — Peritheciis sparsis, superficialibus, globosis, sursum plus minus in ostiolum cylindraceum tenuatis, totis 0,8-1,7 mm. altis, 630-960 µ cr., nigris v. subolivaceis, glabris v. pilorum fasciculis conspersis; contextus cellulis 10-17 \u03c4 diam. olivaceo-viridulis, ostiolo saturatione et glabro; ascis crasse clavatis 540-580 \* 110; sporidiis conglobatis, innumeris (circ. 1000-1030), initio hyalinis, e globoso ellipsoideis, leviter inaequilateris, dein olivaceo-brunneis 15,5-17,5 × 9,5-11,5; appendice primaria sporidiorum clavata,  $7,5-9,5 \times 3,5$ , demum decidua, appendice apicali (ubi adest) incurvata sporidio duplo triplove longiore; paraphysibus crassis, arculatis.

Hab. in fimo muli et ovis, Amani, Africae orient., dein in laboratorio Breslaviae culta.

2. Philocopra coeruleotecta Rehm, Ann. Mycol. IX, 1911, p. 363.— Pe- 6090 ritheciis, arcte gregariis, fimo immersis, senilibus demum liberis, globoso-conoideis, nigris, 0,23-0,3 mm. diam., 0,5 mm. altis, bysso arachnoideo coeruleo hypharum longarum dilute coerulescentium, subramosarum, septatarum, 1,5-3 µ latis, circa ostiolum obtectis et conjunctis saepe in plagis I cm. lat. rotundis, modo papillula conoidea obtusa glabra, recta, rarissime curvata prominente; ascis fusiformibus sessilibus,  $300 \times 35.45$ ; sporis c. 120, 4-6-seriatis, subfuscis, 1-cellularibus, ellipsoideis, apice inferiore truncatulis, ibique appendice filiformi brevi hyalino praeditis, primitus strato mucoso tenui obtectis, interdum et apice superiore tenuiter appendiculatis,  $15-17 \times 10$ ; paraphysibus ramosis, gelatinosis, 2-5  $\mu$  cr. et septatis, hyalinis.

Hab. in fimo, Madison Wis. U. S. Amer. (MISS JOLIVETTE). -Forte affinis Phil. myriosporae (Crouan) Sacc., a ceteris aut numero minori sporarum aut sporis majoribus v. minoribus plane divergit.

- ERIKSSONIA (Penz. et Sacc.) Sydow, in Theiss. et Syd., Ann. Mycol. 13., 1915, p. 315 et 668. — Perithecia singula basi folio insculpta, emergentia, lateraliter in plures appendices stromaticas radiatim producta. Asci octospori, paraphysati. Sporidia simplicia colorata.
- 1. Erikssonia Spatholobi Sydow, in l. c. p. 315. Peritheciis in pa- 6091 renchymate rubro-brunneo <sup>2</sup>/<sub>3</sub> immersis; cavitate perithecii 220 μ lata 200 µ alta, caeterum descriptio nulla.

Hab. in foliis Spatholobi apoensis (Leguminosae), Todaya, Mindanao, Ins. Philipp.

PHAEOTRYPE Sacc., Mycologia 12., 1920, p. 200. (Etym. quasi Thetrype phaeospora). — Stromata pulvinata, erumpenti superficialia, nigra, ostiolis vix extantibus punctulata; perithecia pauca monosticha, substantia discolori excepta. Asci breviter stipitati, octospori, aparaphysati (?). Sporidia allantoidea, majuscula, atro-olivacea. Est omnino Diatrype sed vere phaeospora.

1. Phaeotrype Brencklei Sacc., l. c. — Stromatibus gregariis, subsuperficialibus, peridermii laciniis basi cinctis, depresso pulvinatis, atro-nitidulis, 0,5 × 0,7 mm. diam., superficie levissime colliculosa et punctata; intus sordide albido, carnosulo; peritheciis 8-10 monostichis, globulosis, 0,3 mm. diam., ostiolis punctiformis, obtusis, integris; ascis fusoideis breviter stipitatis, 80-85 × 8-9, octosporis; sporidiis distichis allantoideis curvis, utrinque rotundatis, 16-17 × 3,5-4, atro-olivaceis, subnigricantibus.

Hab. in ramis corticatis emortuis Rosa e sp. (Rosaceae), Whitestone Gully, N. Dak., Amer. bor. (Brenckle).

## Sect. 4. Hyalodidymae

- \*) SPHAERELLA Ces. et De Not.— Syll. I p. 476, IX p. 611, XI p. 295, XIV p. 525, XVI p. 468, XVII p. 635, XXII p. 120.
- 1. Sphaerella Pelvetiae Sutherland, New Phytologist, XIV, nn. 2-3, 6093 p. 34 (1915), fig. I, 1-4 (Mycosphaerella).— Mycelio hyalino, septato, angustissimo, diffuso et omnino intercellulari; peritheciis minutis, 65-85 μ cr., sphaeroideis, minute conoideo-apiculatis, in receptaculo algae dense aggregatis; contextu perithecii apice excepto tenui membranaceo; ascis cylindraceis curvulis, attenuatis, apice incrassato-canaliculatis, 45-55 × 15-20; sporis distichis v. coacervatis, fusoideis, 19-25 × 4,5-5,5, hyalinis, uniseptatis, leniter constrictis, cellulis maturis biguttulatis.

Hab. symbiotice in Pelvetia (Algae), ad litora Scotiae, Enropa bor.

2. Sphaerella Agavis C. Massal., R. Ist. Ven. LXXIV, 2, p. 258 (1914). 6094

<sup>&</sup>quot;) De nomenclatura et systematica gen. Sphaerellae, conferendae sunt observationes Cl. Fr. v. Höhnel, Ueber die Benennung, Stellung und Nebenfruchtformen von Sphaerella Fries (Ber. deutsch. Bot. Ges. 35., 1917, p. 627) et praecipue Cl. H. Klebahn, Aus der Biologie der Askomyzeten (l. c., 36., 1918 p. (47) cum icon.). Ob caracteres fructificationis plerumque imperfectae, ut nova gen. certe habenda ex. g.: Septorisphaerella (cuius st. conid. sistit Septoria), Ramularisphaerella (Ramularia), Cercosphaerella (Cercospora), etc.

Peritheciis epiphyllis, hypodermicis, globulosis, ostiolo prominentibus, 120-180  $\mu$  diam., crebre gregariis, in maculis griseis subcircularibus insidentibus, excipulo submembranaceo; ascis oblongofusoideis, breviter stipitatis, octosporis, 60-80  $\times$  12-16, aparaphysatis; sporidiis infra distichis, supra monostichis, oblongis, utrinque rotundatis, hyalinis, 20-26  $\times$  6-8, parumper supra medium 1 septatis, loculo superiore crassiore, inferiore longiore.

Hab. in foliis emarcidis Agavis americanae (Amaryllidaceae), Verona, It. bor. — An satis a S. Schoenoprasi Awd. distincta?

3. Sphaerella ilicicola A. Maublanc, Bol. Agric. Sao Paulo 1915, p. 6095 313, tab. IV fig. 11-12; Bull. Soc. Mycol. de Fr., XXXVI, 1920, p. 34, tab. II fig. 4-5.— Peritheciis epiphyllis, minutissimis, punctiformibus, globosis, nigris, tunica tenui, cellulosa praeditis, immersis; ascis 8-sporis, elongatis, basi saepius inflatis et sursum rotundato-attenuatis, breviter pedicellatis, 40-50 × 10-12, aparaphysatis; sporidiis 2-3 stichis, oblongis v. oblongo-clavatis, utrinque obtusis, 1-septatis, cellula super. parum latiore, leniter constrictis, hyalinis, guttulatis, 10-12 × 3-4.

Hab. in maculis albidis foliorum Ilicis paraguarie nsis (Aquifoliaceae), sociis Cercospora, Leptosphaeria, Phyllosticta, etc., Paranà, Brasilia merid. (Herb. Mus. R. Jan.).

Sphaerella Acori v. Höhnel in P. Strasser, Verh. zool.-bot. Ges. Wien 6096
 69., 1919, p. 360 (Mycosphaerella). — Ascis sessilibus cylindraceis 80 ≥ 8; sporidiis bilocularibus loculis inaequalibus, superiore conoideo inferiore latiore et rotundato.

Hab. in foliis siccis Acori Calami (Araceae), St. Georgen, Sonntagberg, Austria inf. (LAMBERT). — Socia Leptosphaeria Calami Karst.

5. Sphaerella Alocasiae Sydow, Philipp. Journ. of Sci., VIII (1913) 6097 p. 195 (Mycosphaerella).— Maculis amphigenis, circularibus vel subcircularibus, 2-6 mm. diam., zona fusco-purpurea limitatis, intus sordide albis; peritheciis in centro macularum dense et numerose aggregatis, globosis, atris, 60-80 μ diam., poro circa 18-25 μ lato pertusis, contextu fuligineo; ascis fasciculatis, saccatis usque cylindraceis, 35-52 × 10-16, octosporis, aparaphysatis; sporidiis distichis vel tristichis, cylindraceis, medio septatis, non constrictis, utrinque obtusis, hyalinis, 16-18 × 3-5.

Hab. in folis vivis vel languidis Alocasiae indicae (Araceae), Manila, Luzon, ins. Philipp. (P. W. GRAFF).

6. Sphaerella Anthurii L. E. Miles, Trans. Ill. Ac. of Sc., v. X, 1917, 608 p. 252 (Mycosphaerella). — Maculis magnis quandoque usque 10 cm.

latis, amphigenis ambitu parum irregulari, arescendo translucidis linea angusta obscure brunnea marginatis, demum plus minus distincte laceratis; peritheciis epiphyllis numerosis, subepidermicis, obscuris, ostiolatis, 100-150 u diam.; ascis ovoideis, oblongis v. late clavatis,  $45 \times 15$ -18; sporidiis inordinatis ovoideis, pallide viridulis plerumque indistincte septatis, guttulatis,  $15-20 \times 6$ .

Hab. in foliis Anthurii acaulis (Araceae), pluribus locis in Porto Rico, Amer. Centr.

7. Sphaerella Colocasiae K. Hara, Journ. Plant Protection, Tokyo 1917, 6099 p. 355; Mycologia, 1919, p. 148 (Mycosphaerella). - Peritheciis sparsis, punctiformibus, immersis, demum erumpentibus, globosis v. globoso-depressis, 60-120 µ diam. nigris; contextu pseudoparenchymatico, obscure brunneo, cellulis 5-13 µ cr. praedito; ostiolo terminali verruciformi v. papilliformi, saepe non prominenti, latiusculo, 25-30 g; ascis cylindraceis v, clavatis, supra inconspicue acuminatis v. plerumque rotundatis, infra attenuatis, pedicellatis, 45-70 × 8, 5-10, octosporis; sporis distichis fusoideis, plus v. minus excentrice uniseptato-constrictis, loculo superiori latiori et breviori, acutato, inferiori quandoque attenuato, plerumque rotundato, in quoque loculo 2-nucleatis,  $13-17 \times 4-5$ , hyalinis.

Hab. in foliis Colocasiae antiquorum (Araceae), probabiliter Main Island (Honshû), Japonia. - Species valde noxia.

8. Sphaerella lasiana Sacc., Notae Myc. XXIV p. 6 (Bull. Orto bot. 6100 Nap. 1918). - Maculis ampligenis subcircularibus, raro confluentibus sordide alutaceo-pallidis, anguste atro-marginatis, 4-6 mm. diam.; peritheciis amphigenis dense gregariis, globuloso-depressis, punctiformibus, nigris, 80-100 µ diam. poro rutundo pertusis; contextu minute parenchymatico, brunneo; ascis oblongo-fusoideis, subsessilibus, utrinque subtenuatis, 30-35 × 9, aparaphysatis, 4-6-sporis; sporidiis anguste fusoideis, saepius curvulis, 18-20 × 3, distichis, medio 1-septatis, non constrictis, hyalinis.

Hab. in foliis Lasiae heterophyllae (Araceae), cultae, Singapore, Asia (BAKER).

9. Sphaerella Taccari Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 6101 nos Aires XXIII, p. 52 (1912). - Matrice tota sordide cinerascente; peritheciis amphigenis, sparsis vel hinc inde laxe gregariis, innatoerumpentibus, minutis, globoso-depressis, 100-120 \mu diam., atris, glabris, vix ostiolato-papillatis, membranaceo-subcarnosulis, contextu dense minuteque parenchymatico, olivaceo; ascis subcylindraceis, basi in pedicellum breviusculum productis, 50-55 × 6-7; spo-

ridiis distichis, fusoideis vel subclavulatis, rectis vel leniter inaequilateris, utrinque acutiusculis, ad septum non constrictis, hyalinis,  $10-12 \times 3$ , loculis aequilongis, supero saepius crassiore, eguttulatis.

Hab. in foliis emortuis aridis Taccari Hassleriani (Araccae), in silvis Campo Grande, Misiones: Argentina.

10. Sphaerella Didymopanacis L. E. Miles, Trans. Illin. Ac. of Sc. v. 6102 X, 1917, p. 249 (Mycosphaerella).— Maculis amphigenis plerumque circularibus, quandoque confluentibus sed non confusis, pallide brunneis v. griseis 1-2 cm. diam., linea angusta aurantiaco brunnea limitatis, infra versus marginem macularum peritheciis dense confertis ornatis; peritheciis amphigenis sed infra copiosioribus, erumpentibus parvis obscuris, 70-130 μ diam., ostiolo 12-20 μ diam. praeditis, aparaphysatis; ascis breviter pedunculatis, oblongis, leniter ovoideis, 40-50 × 10-12; sporidiis hyalinis 1-septato-constrictulis, elongato-ellipsoideis utrinque acutatis, 17-20 × 3-3,5.

Hab. in foliis vivis Didymopanaci Mortonii (Araliaceae), Añasco, Utuado in Porto Rico, Amer. Centr.— M. Araliae et Panacis differt sporidiis latioribus, a M. papyrifera et longispora sporidiis statura minori.

11. Sphaerella Aristolochiae Sydow, Ann. Mycol. XII, 1914, p. 555 6103 (Mycosphaerella). — Maculis amphigenis, orbienlaribus, 5-10 mm. diam., centro pallescentibus, albidis, margine elevato atro-purpureo cinctis; peritheciis epiphyllis, in centro macularum gregariis, globulosis, 80-100 μ diam., atris, opacis, parenchymatice ex cellulis 8-10 μ diam., angulatis contextis; ascis sporidiisque non visis.

Hab. in foliis languidis Aristolochiae tagalali (Aristolochiaeae), prov. Cavite Luzon, Ins. Philipp. (C. B. ROBINSON).

12. Sphaerella impatientina Syd. et Hara in Sydow, Ann. Mycol. XI, 1913, 6104 p. 58. (Mycosphaerella). — Peritheciis sparsis v. laxe gregariis, non maculicolis, conico-globosis, 65-100 μ diam., atris, ostiolo praedistincto usque 20 μ longo latoque erumpentibus, contextu membranaceo parenchymatico brunneo ex cellulis 5-7 μ latis composito; ascis fasciculatis, aparaphysatis, clavulatis, apice rotundatis, 35-40 × 6-9, octosporis; sporidiis distichis, ellipsoideo-oblongis, primitus 4-guttulatis, tandem subinde eguttulatis, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 10-12 × 3-4.

Hab. in caulibus emortuis I m p a t i e n t i s sp. (Balsaminaceae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

13. Sphaerella cesatiana Speg. ap. Trav., Fl. it. crypt. Pyren. p. 613–6106 (1913). — Peritheciis plerumque hypophyllis, sparsis v. hinc inde

subgregariis, minutissimis, atris, globosis, 60-70  $\mu$  diam.; ascis elavato-oblongis, subsessilibus, 55-60  $\times$  10, sporidiis subtristichis, eylindraceo-fusoideis, utrinque obtusis aliquantulum curvatis, medio septatis et constrictis, minute 4-guttulatis, 20-25  $\times$  4-4,5, hyalinis.

Hab. in foliis corruptis Alni glutinosae (Betulaceae), in prov. Treviso, Ital. bor. (SPEGAZZINI in herb. Saccardo).

14. Sphaerella conglomeratiformis Bubàk et Vleugel, in J. Vleugel, 6106 Svensk Bot. Tidskr. 11., 1917, p. 309 (Mycosphaerella). — Peritheciis hypophyllis, densissime gregariis, tuberculos hemisphaericos, 1.2 mm. latos, nigros, nudos efficientibus, globosis, 75-120 μ in diam., tunica crassa, contextu pseudoparenchymatico, atro-castaneo, maturis poro minuto apertis. Ascis cylindraceis, 40-50 × 6-8, apice rotundatis, basi breve pedicellatis, octosporis, aparaphysatis. — Sporidiis tristichis fusiformibus, 11-18 × 3-3,5, curvulis, rarius rectis, medio uniseptatis, non constrictis, utrinque attenuato-rotundatis, loculo superiore saepe parum latiore vel interdum supra septum inflatulo.

Hab. in foliis emortuis anni praeteriti Alni incanae var. borealis (Betulaceae), in societate Sphaerellae borealis n. sp. et aliorum fungorum, ad Björkön prope Lulea provinciae Vestrobothnia Sueciae (J. VLEUGEL).

15. Sphaerella borealis Bubàk et Vleugel, in J. Vleugel, Svensk Botes 107 Tidskr., 11., 1917, p. 309 (Mycosphaerella). — Maculis hypophyllis, irregularibus, 1-2 mm. latis, atrogriseis, interdum confluentibus.—Peritheciis hypophyllis, gregariis, globosis, 60-80 μ in diam., immersis, tectis, solum apice conico nigro erumpentibus, tunica crassa, pseudoparenchymatica, castaneo-brunnea. Ascis oblongo-clavatis, 40-50 × 10-12, ad apicem attenuatis et valde incrassatis, sessilibus, octosporis.— Sporidiis ellipsoideo-oblongis, 10-13 × 3,5-4, rectis, medio uniseptatis, non constrictis, utrinque rotundatis, hyalinis, loculo inferiore interdum paulum latiore.

Hab. in foliis emortuis anni praeteriti Alni incanae var. borealis (Betulaceae) in societate Sph. conglomeratiformis n. sp. et aliorum fungorum, ad Björkön prope Lulea provinciae Västerbotten Sueciae (J. VLEUGEL).

16. Sphaerella Alnobetulae Jaap, Annales Mycolog. 15., 1917, p. 105 6108 (Mycosphaerella). — Peritheciis hypophyllis, in greges minutos 1-2,5 mm. latos dispositis, rarius sparsis; punctiformibus, nigris, globosis, 70-110 μ diam., contextu tenui, atro-brunneo, parenchymatico, ostiolo rotundo; ascis fascienlatis et aparaphysatis, sessilibus obverse oblongo-clavatis, v. subfusoideis, apice late rotun-

datis, 35-50 × 11-12, octosporis; sporidiis irregulariter 2-3-seriatis. oblongo-ovatis, rotundatis, aequaliter 2-locularibus, constrictis, 13- $15 \approx 5-7$ , chlorinis.

Hab. in foliis emortuis vetustis Alni viridis (= Alnobetulae) (Betulaceae), pr. Saas-Fee Almagall versus, in Helvetia. -Conferenda cum Sph. Alni-viridis De Not.

17. Sphaerella ipiranquensis Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. 6109 Nac. de Cienc., Cordoba, t. 23., 1919, Extr. p. 107. — Maculis epiphyllis repandulis 5-20 mm. diam. determinatis areola marginali destitutis sordide fusco-arescentibus subpellucidis; peritheciis parenchymate innatis, primo epidermide tectis dein denudatis, numerosis sed relaxatis, pusillis, 150 180 u cr., subhemisphaerico-lenticularibus, minute ostiolato-pertusis, membranaceis, parenchymaticis, glabris atris; ascis obclavulato-subfusoideis, apice obtusissime rotundatis, glabris, atris, crasseque tunicatis, deorsum breviter cuneatis in pedicellum crassum brevissimum productis, aparaphysatis octosporis, 40-45 × 10; sporidiis sublinearibus non v. vix subclavulatis, medio 1-septatis non v. vix constrictis, hyalinis eguttulatis, 15-18 \* 4.

Hab. in foliis vivis Bignoniacearum (Tabebuiae?), in silvis prope Ipiranga Brasilia, Amer. austr. trop. (J. Puiggari).

18. Sphaerella Tabebuiae L. E. Miles, Trans. Illin. Ac. of Sc., v. X, 1917, 6110 p. 249 (Mycosphaerella). - Maculis amphigenis demum albescentibus translucidis, parvis 1,5 mm.diam. area obscura brunneo-purpurascenti indefinite circumdatis; peritheciis numerosis epiphyllis, nigris, 80-130 μ diam., ostiolatis, aparaphysatis; ascis cylindraceis, quandoque subovatis, crasse tunicatis rectis v. curvulis, 50-60 \* 10; sporidiis anguste clavatis, hyalinis, rectis v. curvis medio 1-septatis, constrictulis, loculo inferiore angustiore et subacutato, 17-20 × 3-5.

Hab. in foliis vivis Tabebuiae haemanthae (Bert.) DC. (Bignoniaceae), Vega Baja et Mona Island in Porto Rico, Amer.centr.

19. Sphaerella Implexae Pass.— Sacc. Syll. IX p. 634.— var. implexi- 6111 cola Sacc., Nuovo Giorn. bot. it. 22., 1915, p. 35.— Peritheciis minimis 75-95 \( \mu \) diam., poro irregulari subrotundo 10 \( \mu \) diam. pertusis, contextu fulvo-fuligineo; ascis fusoideis, 42-48 \* 10-12; sporidiis distichis fusoideis, curvulis, obtusis, 14 × 3,5, farcto-diblastis, hyalinis, non constrictis.

Hab. in foliis subvivis Lonicerae implexae (Caprifoliaceae), Uied Babu et Ta Baldu in Insula Melita. - A typo differt maculis rufulis nec griseis, atro-marginatis; sporidiis paullo minori-

bus, loculis subaequalibus, ascis brevioribus.

20. Sphaerella ebulina Petrak, Aun. Mycol. XIII, 1915, p. 16 (Mycosphaerella). — Peritheciis in maculis 2-5 mm. latis angulosis, saepe nervis limitatis dense gregariis, typice epiphyllis sed non raro hypophyllis, primum immersis, demum plus minusve emergentibus, globoso-lenticularibus, ostiolo brevissime conico, poro rotundato pertusis, nigris, 130-180 μ diam.; ascis e basi dilatata parum attenuatis, oblongo-clavatis, apice rotundatis, incrassatis, aparaphysatis, rosulatis sessilibus, 50-65 × 10-14, octosporis; sporidiis di-vel fere tristichis, oblongo-fusoideis, utrinque obtusulis, rectis vel raro parum curvulis, uniseptatis, non vel perparum constrictis, 15-20 × 3-4, hyalinis.

Hab. in foliis putrescentibus Sambuci ebuli (Caprifoliaceae), ad marginem silvae prope pagum Ungersdorf, non procul ab urbe Mahr.-Weisskirchen, Moraviae orientalis.

21. Sphaerella Caricae Maubl., Bull. Soc. Mycol. Fr. 1913 p. 358, t. 6113 XXIV. — Syn. Mycosphaerella Caricae Syd., Ann. Myc. 11., 1913, p. 403, verisim. posterior. — Maculis amphigenis, circularibus vel paululum angulosis, pallescentibus, dein albicantibus, margine obscuriore cinctis, 0,5-4 mm. diam.; peritheciis epiphyllis, sparsis, punctiformibus, nigris, globulosis, ostiolo papillato donatis; ascis cylindraceis, interdum apice rotundato-attenuatis, sessilibus aparaphysatis, 8-sporis, 40-50 × 10-12; sporidiis distichis, fusoideis, utrinque obtusiusculis, rectis vel subcurvulis, 1-septatis, ad septum constrictis loculo superiore leniter inflato, hyalinis, 15-18 × 3-4.

Hab. in foliis vivis Caricae Papayae (Caricaceae), America bor. et merid.— Stat. conidicus est Fusicladium Caricae (Speg.) Sacc. Syll. XVIII p. 580 — Asperisporium Caricae (Speg.) Maubl.

22. Sphaerella tingens Niessl. — Syll. IX p. 621. — f. dianthicola Gonz. 6114
Frag., Mem. R. Soc. Españ. Hist. Nat., t. 11., 1919, 3., p. 88. —
Ascis usque 60 × 18; sporidiis usque 18 × 5, 4-guttulatis.

Hab. in foliis caulibusque languidis vel siccis Dianthi deltoidis (Caryophyllaceae), prope Llivia, Gerona, 1300 mts. alt., Hispania nord.-or. (Fr. Sennen).

23. Sphaerella Drymariae Syd. ap. Fuhrmann et Mayor, Voy. Expl. 6115 Scient. Columbie, in Mem. Soc. neuchât. Sc. Nat. V p. 435 (1913).—

Mycosphaerella.— Maculis amphigenis, minutis, rotundatis, 1-2 mm. latis, flavo-brunneis; peritheciis hypophyllis, irregulariter aggregatis, atris, globosis, 70-90 μ diam., membranaceis, poro pertusis, contextu fuligineo; ascis quoad formam variabilibus, saepius clavatis

vel saccatis, sessilibus vel subsessilibus, apice rotundatis vel etiam attenuatis, 25-40 \* 7-13, octosporis; sporidiis oblongis vel oblongofusoideis, utrinque obtusis, medio spurie 1-septatis, non constrictis, minute guttulatis, subhyalinis vel viridulis, 12-15 \* 3-4.

Hab. in foliis vivis vel languidis Drymariae cordatae (Caryophyllaceae), in regione andina prope Angelopolis in Columbia, alt. 1800 m.

24. Sphaerella lychnidicola Sydow, Ann. Mycol. XI, 1913, p. 58 (My-61) cosphaerella). - Peritheciis amphigenis, non maculicolis, irregulariter distributis, immersis, ostiolo prominulis, ovato globulosis, atris, 50-65 μ diam., contextu parenchymatico membranaceo fuscidulo ex cellulis 6-7 µ diam. composito; ascis clavato-cylindraceis, apice obtusis, fasciculatis, aparaphysatis, 30-40 × 5-7; sporidiis distichis. oblongis, saepe leniter curvulis, utrinque obtusis, medio 1-septatis, non constrictis, 15-20 \* 3, hyalinis.

Hab. in foliis emortuis Lychnidis Miquelianae (Caryophyllaceae), Kawauye-mura prov. Mino, Japonia (K. HARA).

25. Sphaerella silenicola Woronichin, Monit. Jard. Bot. Tiflis XXVIII 6117 (1913) p. 17 (Mycosphaerella). - Maculis circularibus, flavo-brunneis, zona obscuriore cinetis, usque ad 3 mm. diam.; peritheciis globosis, amphigenis, 45-60 \(\mu\) diam.; ascis fere clavatis, 25-30 \(\sigma\) 9-10, aparaphysatis; sporidiis subdistichis, fusoideis, uniseptatis, hyalinis,  $12-15 \approx 3-3,5$ .

Hab. in foliis vivis Silenes compactae (Coryophyllaceae), Abchasia, Caucaso (Woronow). — A Sph. pulviscula Cke. cui magnitudine ascorum similis, sporis majoribus differt.

26. Sphaerella Andryalae Gz. Frag., Trab. Mus. Nac. Cienc. Nat., ser. 6118 Bot. n. 4, p. 11 extr., fig. 3.— Peritheciis caulicolis, atris, sparsis, velatis dein erumpentibus, globosis, 120-150 µ diam., ostiolo circulari pertusis; ascis ovato-oblongis, breviter pedicellatis, saepe curvulis vel irregularibus, 50-60 \* 14-16, apice incrassatulis; sporidiis distichis vel subtristichis, ovato-oblongis, ad septum non vel vix constrictis, loculis inaequalibus, 12-16 \* 4-5.

Hab. in caulibus siccis Andryalae ragusinae (Compositae), prope Navacerrada in montibus Carpetanis, Hispania.

27. Sphaerella Erlangeae Baccarini, F. etiop. II, n. 74 in Pirotta, Ann. 6119 Bot. 14., 1917, p. 133.—Peritheciis hypophyllis, gregariis et saepe dense congestis, nigris, epidermide tectis, ostiolo simplici pertusis 140-160 μ latis; ascis clavatis brevissime stipitatis 40 × 8-9; sporidiis distichis oblongo-fusoideis utrinque obtusiusculis, 17 × 4, uni-

septatis ad septum non constrictis.

Hab. in foliis Erlangeae abyssinicae (Compositae), Cusquam (Gondar) Aetyopia (CHIOVENDA).

28. Sphaerella eupatoricola v. Höhnel in Strasser, Verh. zool.-bot. Ges. 6120 Wien .69., 1919, p. 361 (Mycosphaerella). — Peritheciis numerosis sparsis, globosis, superficialibus non ostiolatis (contextu-membranaceo parenchymatico), levibus, 80-100 μ; ascis cylindraceis v. clavatis, sessilibus, 40 × 8; sporidiis cuneiformibus, hyalodidymis, fortiter constrictis, loculo sup. obtuse conoideo, infer. latiore, uniguttulatis, 10-12 × 3-4.

Hab. in foliis caulibusque siccis Eupatorii cannabini (Compositae), Sonntagberg, Austria inf. (STRASSER).

- 29. Sphaerella aliena Pass.— Syll. IX, p. 621 f. Hieracii Gonz. Fragoso, Bol. R. Soc. Españ. Hist. Nat., t. 18., 1918, p. 366.— A typo differt ascis amplioribus (30-36 \* 12-16, sporidiis 12-14 \* 3,5).— Hab. in scapis siccis Hieracii carpetani (Compositae), prope Canencia, Madrid, Hispania (C. Vicioso).
- 30. Sphaerella Mulgedii-alpini Petrak, Ann. Mycol. 14., 1916, p. 159 (Mycosphaerella). Peritheciis in maculis canescentibus vel nigrescentibus, 1-6 mm. longis, 0,5-2 mm. latis, immersis, epidermide tectis fusco-nigrescentibus, 180-200  $\mu$  diam., globosis, saepe parum depressis. Ascis rosulatis aparaphysatis clavatis, basim versus paullatim angustatis, breviter sed crassiuscule stipitatis, apice rotundatis, 32-40  $\times$  6; sporidiis 1-1,5-stichis ovato-oblongis vel fere fusoideis, medio circiter uniseptatis, non vel perparum constrictis utrinque angustatis obtusis rectis vel parum curvutis, 10-13  $\times$  3-4, hyalinis.

Hab. in caulibus putrescentibus M u l g e d i i a l p i n i (Compositae), Kesselgrund M. Glatzer-Schneeberg Moraviae bor. (I. HRUBY).

31. Sphaerella prenanthicola v. Höhnel in P. Strasser, Verh. zool. bot. 6123 Ges. Wien 69., 1919, p. 361 (Mycosphaerella). — Péritheciis foliicolis amphigenis superficialibus nigris globoso-depressis sparsis sed copiosis, non ostiolatis, contextu membranaceo e cellulis brunneis formato, 80-100 μ diam.; ascis subclavatis, 45-50 × 8-10, vetustate longioribus rosulatis; sporidiis distichis hyalinis, cuneatis non constrictis, 6-8 × 3-4,5.

Hab. in foliis siccis Prenanthis purpureae (Compositae), Sonntagberg, Austria Inf. (STRASSER).

32. Sphaerella Virgaureae Krieger, Ann. Mycol. IX, 1911, p. 216; Fungi 6124 saxonici fasc. 43 n. 2112. — Peritheciis minutis, crebris, maculis

parvis, atris saepe confluentibus subcrustiformibus efformantibus; aseis late ovoideis octosporis,  $27\text{-}30 \times 9\text{-}10$ ; sporis cylindraceo-ovoideis, hyalinis, bilocularibus, distichis v. tristichis,  $10\text{-}15 \times 2\text{-}3$ .

Hab. in foliis vetustis Soli daginis Virgae aureae (Compositae). Kirnitzschtale prope Schandau, Germaniae.

33. Sphaerella lindiana Jaap, «Fungi Sel. Exsice. » n. 771, an. 1916; 6125 Verh. bot. Ver. Prov. Brandb. 59., 1917, p. 30 (Mycosphaerella).— Descriptio deficit.

Hab. in foliis hyeme superantibus T a n a c e t i vulgar i s (Compositae), prope Triglitz in Pregnitz, Germania.

34. Sphaerella Abietis Rostr., Plantenpatol. p. 597 (1902); Lind, Dan. 6126 Fungi. p. 204. — Peritheciis amphigenis, nigris, epidermide innatis, dense sparsis, globosis, poro simplici pertusis, c. 125 μ diam.; ascis fasciculatis, oblongis, 50 × 10, octosporis; sporidiis oblongo-ovatis, 1-septatis, hyalinis, 12-16 × 5-6, ad septum constrictis, loculo infero paullo angustiore.

Hab. in foliis et gemmis Abietis albae, Ab. cephalonicae, Ab. Nordmannianae, Ab. Pinsapo, Ab. arizonicae (Coniferae), in Dania. — Observante A. Rostrup, Phoma Abietis et Toxosporium abietinum cum hac specie metagenetice nectuntur.

35. Sphaerella cunninghamiae Woronichin in Monit. Jard. Bot. Tiflis 6127 XXVIII (1913) p. 16 (Mycosphaerella). — Peritheciis immersis, epidermidem vix elevantibus, 50·65 μ diam., in maculis decoloratis foliorum gregariis, maculis plerumque extremam foliorum partem occupantibus; ascis cylindraceis, apice rotundatis, brevissime pedicellatis, 40·55 × 5·6, aparaphysatis; sporidiis distichis, fusoideis, hyalinis, 9·12 × 2,8.

Hab. in foliis vivis C u n n i n g h a m i a e s i n e n s i s (Coniferae), in Caucaso. — Sph. Taxodii Cke. proxima, differt magnitudine omnium partium majore.

36. Sphaerella pinicola Fautr.— Syll. XI p. 297 — fm. conorum Naou-6128 moff, Bull. Soc. Oural. Amis Sc. Nat. XXXV (1915) p. 21 extr. (My-cosphaerella). — A typo differt peritheciis minoribus, 70 μ diam. et ascis longioribus, 40-50 × 9-10.

Hab. in squamis conorum Pini (Coniferae), Gub. Perm in Rossia.

37. Sphaerella Roureae Syd., Enum. Philipp. Fungi I, in Philipp. 6129 Journ. of Sci. VIII (1913) p. 270 (Mycosphaerella). — Maculis distinctissimis, irregularibus, 2-10 mm. diam., in epiphyllo albidis vel

albo griseolis, in hypophyllo sordide ochraceo brunneis, saepe angulatis; peritheciis epiphyllis, sparsis, minutis, tectis, atris, 70-100  $\mu$  diam., poro pertusis, contextu parenchymatico fuscidulo; ascis fasciculatis, aparaphysatis, clavato-saccatis, 35-40  $\times$  10-14; sporidiis 2-3-stichis, elongato-oblongis, circa medium septatis, non constrictis, hyalinis, 15-18  $\times$  3-3,5.

Hab. in foliis Roureae erectae (Connaraceae), Luzon, Prov. Bataan, ins. Philipp. (P. W. GRAFF).

38. Sphaerella Ipomoeae Ferraris, in Ferr. e Massa, Ann. Myc. X, 1912, 6130 p. 286, tab. IV fig. 2, 1-4. — Peritheciis caulicolis, sparsis, atris, pertusis, globoso-depressis, 120 μ circ. diam.; ascis aparaphysatis, subsessilibus, basi dilatatis, apice rotundatis, plerumque 65 \* 17; sporidiis bilocularibus, loculo superiore subattenuato, utrinque rotundatis, hyalinis, medio septatis, sed leniter v. non ad septum constrictis, 19 \* 7.

Hab. in caulibus siccis I p o m o e a e p u r p u r e a e (Convolvulaceae), Crescentino, Italia bor. — Socia adest Sphaeropsis Ipomocae.

39. Sphaerella Matthiolae Gonz. Frag., Microm. de España y Cerdana, 6131 in Trab. Mus. Nac. Cienc. Nat. Madrid, Ser. Bot. n. 9, 1916, p. 100. — Peritheciis in maculis rotundatis, 3-4 mm. diam., nigrescentibus, sparsis vel gregariis, saepe substriiformis insidentibus, nigris, membranaccis, globoso-conoideis, usque 150 μ diam., ostiolo papillulato erumpentibus; ascis ovoideo-claviformibus, usque 60 × 22, parietibus crassis, brevissime pedicellatis, rectis vel incurvatis; ascosporis irregulariter distichis vel conglobatis, obovatis, utrinque rotundatis, 1-septatis, non constrictis, loculo inferiore paullo angustiore, hyalinis, loculis 1-2 obsoletis guttulatis, 18-20 × 5-5 (!), extus ascis usque 24 × 6.

Hab. in siliquis emortuis Matthiolae annuae cult. (Cruciferae), Madrid in Hispania (C. BOLIVAR).

40. Sphaerella Melonis Ferraris, in Ferraris e Massa, Ann. Mycol. X, 6132 1912, p. 286, tav. IV fig. 1, 1-4. — Maculis albidis ochraceo-marginatis; peritheciis in zona ochracea copiosis, sparsis, globosis, membranaceis, brunneis, poro distincte pertusis; ascis aparaphysatis; sporidiis subfusoideis v. rhomboideis, quandoque leniter incurvatis, in medio 1-septatis, ad septum indistincte v. minime constrictis, utrinque acuminato-rotundatis, 14-17 × 4,5-6, hyalinis.

Hab. ad folia viva Cucumis Melonis (var. « moscatello d'inverno » (Cucurbitaceae), Verrua Sabaudia, Italia bor.

41. Sphaerella Actinidiae Sydow et Hara in Sydow, Ann. Mycol. XI, 618 1913, p. 59 (Mycosphaerella).— Peritheciis hypophyllis, non vel vix maculicolis, sparsis, vel laxe aggregatis, immersis, ostiolo minuto tantum erumpentibus, globosis, atris, 60-80 μ diam., contextu membranaceo parenchymatico fusco ex cellulis 6-7 μ diam. composito; ascis fasciculatis, clavato cylindricis, apice obtusis, 30-45 × 7-11, octosporis, aparaphysatis; sporidiis distichis, rectis v. lenissime curvulis, subfusoideis, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 14-18 × 2,5-3.

Hab. in foliis emortuis Actinidiae sp. (Dilleniaceae), Kawauye-Mura, Japonia (K. HARA).

42. Sphaerella dioscoreicola Syd., Ann. Mycol. 14., 1916, p. 361 (Myco-6134 sphaerella).—Maculis amphigenis, distinctissimis, orbicularibus vel irregularibus, saepe confluentibus, 3-10 mm. diam., brunneis, dein centro pallidioribus, linea elevata atropurpurea cinctis; peritheciis epiphyllis, subgregariis, fere lenticularibus, tectis, 70-100 μ diam., poro minuto 10-14 μ lato pertusis, parenchymatice ex cellulis quoad magnitudinem variabilibus, 8-14 μ diam., contextis, olivaceo-brunneis; ascis fasciculatis, aparaphysatis, clavatis, superne late rotundatis, basi in pedicellum attenuatis 8-sporis, p. sp. 30-40 \* 14-17; sporidiis plerumque distichis, ovato-oblongis, medio septatis, vix vel leniter constrictis, guttulatis, hyalinis, 12-13 \* 5-6.

Hab. in folis vivis Dioscorea e a culeatae (Dioscoreaceae), Los Baños, ins. Philipp. (C. F. BAKER).

43. Sphaerella Diospyri Sydow, Annales Mycol. XI, 1913, p. 59 (My-6135 cosphaerella). — Peritheciis hypophyllis, non maculicolis, plerumque in greges minutos v. mediocres densiuscule dispositis, globulosis, atris, 70-100 μ diam., ostiolo minuto erumpentibus, contextu membranaceo parenchymatico brunneo ex cellulis 6-8 μ diam. composito; ascis cylindraceo-clavatis, fasciculatis, aparaphysatis, apice obtusis, 30-45 × 9-12, octosporis; sporidiis oblongo-ellipsoideis, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 12-15 × 3-4.

Hab. in foliis emortuis Diospyri Kaki (Ebenaceae), Kawanye-mura prov. Mino, Japoniae (K. HARA).

44. Sphaerella altera Pass. — Sacc. Syll. IX p. 658. — Sacc., Notae 6136 Myc. XX, Nuovo Giorn. bot. it. 23., 1916, p. 188.

Hab. in caulibus languidis Equiseti hiemalis (Equisetaceae), Karner, N. Y., Amer. bor. — Perithecia saepe seriata, 60-80  $\mu$  diam., asci tereti elavati brevissime stipitati, 50-60  $\approx$  9-11, octospori, paraphysibus satis distinctis obvallati; sporidia tereti-elavu-

lata, utrinque, praecipue apice obtusula, 1-septata, vix constricta.  $14 \times 3,5$ , hyalina, fareta, initio muco tenui obducta. Ob paraphyses potius *Didymellae* species et tune differret a specie Passeriniana, sed hoc vix probabile videtur, immo inquirendum est an *Sph. altera* ab antiquiore *Sph. Equiseti* sit rite distincta.

45. Sphaerella Unedinis Jaap, Ann. Mycol. 14., 1916, p. 13 (Mycosphae rella).— Peritheciis copiose gregariis, in maculis griseis atro-brunneo marginatis, subrotundis v. angulosis, 2-10 mm. latis insertis, typice epiphyllis, erumpentibus, nigris, depresso-globosis, 80-110 μ diam. ostiolo latiusculo, 25-30 μ diam. pertusis; contextu e flavo-virenti nigricanti; ascis fasciculatis, aparaphysatis, sessilibus, tereti fusoideis, e medio deorsum crassioribus, apice rotundatis, 35-40 × 8-10, octosporis; sporidiis oblongo-clavulatis, rotundatis, bicellularibus, cellula sup. paullo crassiore, 12-16 × 2-3,5, hyalinis, superne oblique distichis, inferius tristichis.

Hab. in foliis vegetis Arbuti Unedinis (Ericaceae), pr. Zelenica, Bocche di Cattaro, Dalmatiae.

46. Sphaerella occulta Bubàk, Ann. Mycol. XIII, 1915, p. 26 (Mycosphaerella).— Maculis usque 1 cm. in diam., rotundatis vel in marginibus et apicibus dimidiatis, griseis, fusco-limitatis; peritheciis subepidermicis, globosis, 75-120 μ in diam., nigris, crasse tunicatis, contextu nigro-fusco, grosse pseudoparenchymatico, papilla brevi, conica erumpentibus; ascis oblongo-cylindricis, 45-65 × 7-10, apice parum attenuatis, rotundatis, basi fortiter attenuatis, octosporis. Sporidiis fusiformibus, 11-15 × 2,5-3, medio vel prope medium uniseptatis, loculo superiore crassiore, hyalinis.

Hab. ad folia Rhododendri pontici hybridi (Ericaceae), in viridariis in Eisgrub, Moravia (ZIMMERMANN). — Socia adest Phyllosticta occulta Bubàk I. c.

47. Sphaerella Vaccinii Cooke — Sace. Syll. I p. 493.—Var. Corymbosi 6139 Sace., Notae Mycol. XX, in N. Giorn. bot. it. 23., 1916, p. 187.— Omnibus partibus minor; peritheciis gregariis, vix maculas angulosas formantibus, 60-70 μ diam; ascis clavulatis 35 × 7; sporidiis tereti-clavulatis, 1-septatis, non constrictis, 14-15 × 3, hyalinis.

Hab. in utraque pagina foliorum languentium V a c c i n i i c ory m b o s i (Ericaceae), Spruce Pond, Adirondack mts., N. Y., Amer. bor. (Peck).

48. Sphaerella Erythroxyli Spegazz., Ann. Soc. Cient. Argentina t. 90., 6140 1920, p. 27. — Maculis aridis indeterminatis albescentibus pellucidis saepe totum folium jam putrescentem occupantibus; perithe-

ciis epiphyllis sparsis v. laxe gregariis, lenticularibus minutis, 130-150  $\mu$  diam., glabris atris ostiolatis, coriacello-membranaceis, contextu parenchymatico parum distincto atro-olivaceo; ascis linearibus v. vix clavulatis, 60·70  $\times$  8·10, sursum abruptiuscule rotundatis, deorsum longe attenuato-pedicellatis, octosporis, aparaphysatis v. quandoque pseudoparaphysibus nonnullis commixtis; sporidiis anguste fusoideis, rectis v. vix curvulis, utrinque acute rotundatis medio 1-septatis non constrictis, levibus, hyalinis, 12-15  $\times$  3-4.

Hab. in foliis Erythroxyli Cocae (Erythroxylaceae), Rep. Argentina bor. andina, America austr. — Status pycnidicus verisimiliter *Phyllosticta Erythroxyli* Graz.

49. Sphaerella Brideliae Sydow, Annales Mycolog., v. XII, 1914, p. 614, 199 (Mycosphaerella). — Maculis distinctissimis, amphigenis, angulatis, 2-8 mm. diam., tandem confluendo majoribus, rufo-brunneis v. dilute castaneo-brunneis; peritheciis epiphyllis sparsis v. laxe aggregatis, minutis, 60-90 μ diam., atris, tectis, contextu fuligineo minute parenchymatico, poro minutissimo pertusis; ascis fasciculatis, aparaphysatis, subsaccatis usque cylindraceis, 35-50 \* 10-16, octosporis; sporidiis plerumque distichis, oblongo cylindraceis, utrinque obtusis, medio 1-septatis et non v. vix constrictis, hyalinis, 11-16 \* 2-3, loculo superiore parum latiore.

Hab. in foliis vivis Bridelia e stipularis, Los Baños ins. Philippin. (C. F. BAKER).

50. Sphaerella Daphniphylli Sydow et Hara, in Sydow, Annales Mycologici XI, 1913, p. 57 (Mycosphaerella). — Maculis amphigenis, valde conspicuis, orbicularibus vel irregularibus, magnis, <sup>π</sup>/<sub>4</sub> ad 1,5 cm. diam., albescentibus, linea latiuscula fusco-purpurea elevata marginatis; peritheciis epiphyllis, numerosis in quaque macula, immersis, vertice prominulis, applanato-globosis, atris, poro latiusculo pertusis, submembranacee contextis, contextu opaco parenchymatico, 55-75 μ diam.; ascis fasciculatis, clavatis, sursum saepe attenuatis, 40-55 × 9-13, octosporis; sporidiis irregulariter distichis, oblongo-clavatis, circa medium 1-septatis, non constrictis, hyalinis v. subhyalinis, 15,5-17,5 × 2,5-3,5, loculo supero latiore obtuso, inferiore sensim attenuato.

Hab. in foliis subvivis Daphniphylli glauces centis (Euphorbiaceae), Kagoshima prov. Satsuma Japoniae (S. Kawagoi).

51. Sphaerella Endospermi Syd., Ann. Mycol. 15., 1917, p. 206 (Myco- 614) sphaerella). — Maculae amphigenae, distinctae, orbiculares, minutae,

2-3 mm. diam., albido-flavidae, exarescentes, purpureo marginatae; perithecia epiphylla, gregaria immersa nitidula, poro minutissimo praedita, 70-110  $\mu$  diam., contextu parenchymatico flavo-olivaceo, cellulis 5-7  $\mu$  diam.; asci fasciculati, sessiles, obclavati vel saccati aparaphysati, 40-50  $\times$  11-15, octospori, sporae in superiore asci parte plerumque monostichae, in inferiore di-tristichae, cylindraceae, utrinque obtusae, medio septatae, non constrictae, hyalinae, 16-19  $\times$  3-4.

Hab. in foliis subvivis Endospermi peltati (Euphorbiaceae), Kalinga, Ins. Philipp. (H. S. YATES).

52. Sphaerella Heveae Petch, Ann. R. Bot. Gard. Peradeniya, V. VI, 6144 P. III, 1917, p. 223.— Peritheciis gregariis, subepidermalibus, subprominentibus, nigris, 60-70 μ diam.; ascis clavatis, octosporis, 30 × 6; sporis subfusoideis vel auguste ovoideis, obtusis, uniseptatis, leniter constrictis, 9-10 × 2,5.

Hab. in foliis Heveae brasiliensis (Euphorbiaceae), Suduganga, Oeylon.

53. Sphaerella heveana Sacc., Not. Myc. XXIV p. 6 (Bull. Orto bot. 6145 Nap. 1918).— Maculis vagis, indeterminatis, arescendo pallide alutaceis; peritheciis amphigenis late densiuscule gregariis, globosolenticularibus perminutis, 80-100 μ diam., poro pertusis, nigricantibus; contextu dense celluloso, fuligineo; ascis clavatis, apice rotundatis, breviter tenuato stipitatis, aparaphysatis, 8-sporis (nou omnino maturis visis), tereti-oblongis, distichis, rectis curvulisve, obsolete 1-septatis, 12 × 3, hyalinis.

Hab. in foliis emortuis Heveae brasiliensis (Euphorbiaceae) cultae, Singapore, Asia or. (BAKER).

54. Sphaerella Homalanthi Sydow, Ann. Mycol. 18., 1920, p. 100 (My-6146 cosphaerella). — Maculae distinctissime epiphyllae, orbiculares, 3-10 mm. diam., subinde confluentes, centro albido-ochraceae, zonula lata purpurascente circumdatae, in hypophyllo multo minus conspicuae; perithecia epiphylla, sparsa vel pauca aggregata, immersa, diutius tecta, tandem vertice erumpentia, 65-90 μ diam., contextu subopaco minute parenchymatico; asci sessiles, cylindraceo-saccati, 40-46 × 8-12, aparaphysati, 8-spori; sporae 2-3-stichae, oblongae, obtusae, circa medium septatae, non constrictae, hyalinae, 14-17 × 3-3,5.

Hab. in foliis vivis Homalanthi alpini (Euphorbiaceae), Mt. Banajao, prov. Laguna, Ins. Philippin. (O. A. REINKING).

Sphaerella weiriana Sacc., Nuovo Giorn. bot. ital. XXVII, 1920, 6147
 p. 76. — Maculis epiphyllis subrotundis, 2-3 mm. diam. alutaceis,

atro-marginatis, dein centro albicantibus; peritheciis globoso-lenticularibus, 250 µ diam nigris velatis dein, epidermide rimose lacerata, nudatis, pertusis; contextu dense celluloso, fuligineo; ascis fusoideo-clayatis, subsessilibus, 70-75 × 14, octosporis aparaphysatis; sporidiis oblique 1-stichis, cylindraceo-fusoideis, utrinque rotundatis, 16-19 \* 3,5-4, rectis curvulisve, 1-septatis, non constrictis, hyalinis.

Hab. in foliis languidis Castanopsis chrysophyllae (Fagaceae), Spokane Washington, Amer. bor. (WEIR).

56. Sphaerella operculata Sacc., Nuovo Giorn. bot. it. v. XXVII, 1920, 6148 p. 76. — Maculis epiphyllis minutis, irregularibus, 1-2 mm. diam., subinde confluentibus, sordide ochraceis, non discolori-marginatis; peritheciis pauci gregariis globoso-lenticularibus, 180-220 μ, nigris, epidermide operculatim secedente erumpentibus, ostiolo 12-15 µ diam. pertusis; contextu dense celluloso castaneo-fuligineo; ascis saepe rosulato-curvatis, oblongo-teretibus, obtusis, subsessilibus, 50-55 \times 8-10, initio paraphysibus? spuriis, parce obvallatis; sporidiis distichis fusoideis utrinque obtusulis, 1-septatis, vix constrictis, 13-16 × 3-4, hyalinis, rectiusculis.

Hab, in foliis languidis Quercus chrysolepidis (Fagaceae), Spokane Washington, Amer. bor. (WEIR). - Ob rudimenta paraphysium ad Didymellam nutat, sed habitus. Sphaerellae.

57. Sphaerella septorispora Sacc., Ann. Mycol. XII, 1914, p. 287. - 6149 Maculis indeterminatis immarginatis, alutaceo-pallidis; peritheciis hine inde gregariis typice epiphyllis, globoso-lenticularibus, nigris, punctiformibus, 120-160 µ diam., poro rotundo pertusis, contextu atro-fuligineo; ascis tereti-clavatis subsessilibus, rosulatis, aparaphysatis, 60-70 × 9-10, octosporis; sporidiis 2-3-stichis cylindraceofusoideis, curvulis, utrinque obtusulis, medio 1-septatis, non v. vix constrictis,  $30-38 \times 2.5-4$ , hyalinis, eguttatis.

Hab. in foliis morientibus Quercus Roboris (Fagaceae), M. Weisskirken, Mariental, Moraviae (F. PETRAK). - Affinis Sph. Piri, Sph. Populi, Sph. Grossulariae sed satis distincta.

58. Sphaerella berlesiana Trav., Fl. it. crypt. Pyren. p. 613 (1913), 6150 Sph. simulans Berl. et Br., Microm. Trid. p. 27 (1889) non Cooke.-Peritheciis amphigenis, dense sparsis, macula obsoleta albicante insidentibus, epidermide primo tectis, dein prominulis, globoso-conoideis, epapillatis, fuligineo atris; ascis clavatis, sessilibus 50-60 \* 9-12; sporidiis conferte distichis, fusoideis, subinde parum inaequilateralibus, medio v. paullo extra medium septatis, non con-

strictis, dilute chlorinis, 20-22 × 4-5.

Hab. in foliis emortuis Quercus (Fagaceae), prov. Trento, Ital. bor. — A Sph. simulanti Cooke, quae Sph. maculiformi peraffinis est, probo diversa.

59. Sphaerella rehmiana Jaap, Verhandl. bot. Ver. Brandenb. LVI p. 6151 81 (1914) (Mycosphaerella). — Peritheciis minutissimis punctiformibus, in maculis elongatis parvis griseis innatis, gregariis v. subsparsis, globosis, 50-100  $\mu$  diam., ostiolo rotundo 20  $\mu$  diam. pertusis; contextu parenchymatico, brunneo-nigricante; ascis elavatis,  $40 \times 10$ , octosporis; sporidiis elongato-clavatis, apicibus rotundatis, 2-cellularibus, 4-guttulatis,  $10\text{-}14 \times 2\text{,}5\text{-}3\text{,}5$ ; septo parum excentrico, non constrictis.

Hab. in frondibus Adianti Capilli-Veneris (Filices), pr. Gardone ad Benacum, Ital. boreal.

60. Sphaerella subastoma F. L. Stevens et N. E. Dalbey, Mycologia, 6152 11., 1919, p. 8, fig. 13-15 (Mycosphaerella).— Maculis brunneis elongatis juventute angustis 3-4  $\times$  1-2 mm., venis lateraliter limitatis; peritheciis solitariis v. late 2-40 gregariis e brunneis nigris, globosis, 125  $\mu$  diam., subepidermicis infrastomaticolis; ostiolo 20-30  $\mu$  lato; ascis 8-sporis, 47  $\times$  20, apice fortiter incrassatis; sporis elongatis angustis, hyalinis, 22-24  $\times$  4.

Hab. in foliis Aneimiae adiantifoliae (Filices), Dos Bocas, Porto Rico, Amer. bor.

61. Sphaerella Andrewsii Sacc., Notae Myc. XXII (R. Acc. Pad. 1917), 6153 p. 165.—Maculis epiphyllis v. bracteicolis subcircularibus 1-2 mm. latis, v. irregularibus, denique alutaceo-albidis praecise limitatis; peritheciis epiphyllis, punctiformibus, nigris, globuloso-lenticularibus, 100-120 μ diam., ostiolo rotundo minuto, 8-10 μ diam., praeditis, hyphulis brunneis circumdatis; contextu denso atro-fuligineo; ascis (non penitus maturis) tereti-clavatis, 35-40 γ 8-9, subinde flexis, fasciculatis, aparaphysatis, octosporis; sporidis navicularibus, curvulis, 12-14 × 3,5-4, deorsum subacutis, 1-septatis, constrictulis, hyalinis, saepe 2-guttatis, subdistichis.

Hab. in foliis bracteisque subvivis G e n t i a n a e A n d r e w s i i (Gentianaceae), Sandhills-Anselm, Dakota, Amer. bor. (BRENKLE).—Perithecia initio sporulis liberis globulosis, 4-5 μ diam. v. 6-7 × 4,5, intus guttulatis, hyalinis foeta, denique ascigera. Etsi non probe matura ab affini Sph. Deschmanni Voss (Syll. IX p. 628) videtur diversa sporidiis brevioribus et latioribus, maculis alutaceis etc.

62. Sphaerella arthraxonicola Naoumoff, Bull. Soc. Mycol. de Fr., 1914, 6154

p. 75, t. 3-4 (Mycosphaerella).— Maculis nullis, peritheciis epiphyllis, sparsis, immersis, velatis, dein ostiolo erumpentibus, fere globosis,  $60\text{-}90 \times 70\text{-}120$ , contextu parenchymatico firmulo, cellulis exterioribus polyedris  $12 \times 9$  diam.; ascis fasciculatis, clavatis, apice incrassatis, pedicello breve, 8-sporis  $27\text{-}35 \times 12$ ; sporulis 1-septatis fusiformibus, monostichis vel raro subdistichis, rectis rarius curvulisve, parum constrictis,  $12\text{-}15 \times 2\text{,}5\text{-}4$ , hyalinis.

Hab. in foliis languidis A'r thraxonis ciliaris (Graminaceae), socia Bremia graminicola, etc., prov. Austro Ussuriensi, Rossiae-Orient.

63. Sphaerella bambusina Syd. et Butl., Ann. Mycol., IX, 1911, p. 6155 407. — Maculis irregularibus, 0,5-2 cm. long., tandem confluendo majoribus, exaridis, albidis; peritheciis numerosis dense sparsis, globosis, minutissimis, 50-75 μ diam., atris, poro pertusis; ascis clavatis, 35-45 × 9-12,5, octosporis, aparaphysatis; sporidiis oblongis, 1-septatis, hyalinis, 12-16 × 3-4.

Hab. in foliis vivis B a m b u s a e sp. (Graminaceae), Wahjain Assam, Indiae or. (E. J. Butler).— A Sph. Bambusae Pat. differt peritheciis non caulicolis et sporidiis paullo majoribus.

64. Sphaerella ignobilis Auersw.— Sph. perpusilla Fuck.— Sacc., Syll. 6156 I p. 528 — f. Bromi Gonz. Frag., Flor. Hispal. Microm. in Trab. Mus. Nac. de Cienc. Nat. Madrid, Ser. Bot. n. 10, 1916, p. 80. — Peritheciis numerosis, epi-vel hypophyllis, sparsis, immersis, atris, globosis, 60-125 μ diam.; contextu membranaceo, ostiolo minuto pertusis; ascis clavatis vel ovato-oblongis, rectis vel leniter curvatis, subsessilibus; sporidiis distichis vel conglobatis, cuneato-oblongis, 1-septatis, loculis inaequalibus, hyalinis, obsolete granulosis, 10-12 × 3-4.

Hab. in glumis, foliis, vaginisque Bromi mollis (Graminaceae), prope Hispalis (Sevilla), Hispania.— A typo satis diversa, probabiliter ad sp. nov. adscribenda.

- 65. Sphaerella Dactylidis Pass. Syll. IX p. 655. f. matritensis Gonz. 6157 Fragoso, Bol. R. Soc. Españ. Hist. Nat. t. 18., 1918, p. 366. A typo recedit ascis latioribus et praecipue magnitudine sporidiorum (ascis 45.54 ≈ 12.18, sporidis 18.21 ≈ 4.5). Hab. in culmis foliisque siccis v. putridis D a c t y l i d i s g l o m e r a t a e (Graminaceae), prope Madrid, Hispania (J. Cuesta).
- 66. Sphaerella hambusifolia Miyake et Hara, Botan. Mag. Tokyo, 1910, 6158 pp. 338-240.— Tanaka, Mycologia 1922, p. 85 (Mycosphaerella). Folicola. Pycnidiis punctiformibus, nigris, immersis, globosis v.

depresse globosis, fuligineis, apice apertis,  $70\text{-}100 \times 60\text{-}90$ ; sporidiis copiosis, maturis in cirrhum exeuntibus, ellipsoideis, ovoideis v. cylindraceis, hyalinis,  $2\text{-}3.5 \times 1\text{-}1.5$ , minute pedicellatis; peritheciis pycnidiis intermixtis, globosis v. globoso-depressis,  $70\text{-}100 \times 90\text{-}100$ , raro  $60 \mu$  diam.; parietibus crassis, subparenchymaticis, fuscis v. nigris, hostiolo applanato v. leniter elevato; ascis numerosis, fasciculatis, oblongo-ovoideis infra plus v. minus stipitatis, v. fusoideo-lunatis, utrinque obtusis,  $37\text{-}50 \times 9\text{-}10$ , octosporis, aparaphysatis; sporis distichis, ovoideis v. ellipsoideis, uniseptatis, non constrictis, hyalinis, contextu primum granuloso, dein homogeneo,  $13\text{-}16 \times 4.5\text{-}5$ .

Hab. parasitica in foliis Phyllostachydis puberulae et bambusoidis (Graminaceae), Japonia.— A Sp. Arundinariae Atk. pluribus notis diversa.

67. Sphaerella Bambusae (M. et H.) Sacc., Guignardia Bambusae Mi 6159 yake et Hara, Stud. üb. Pilze Bambus. in Jap., in litt. 1922.— Peritheciis phyllogenis, marginalibus, subepidermicis, ostiolo erumpentibus, solitariis v. binis, globosis v. ovalibus, atro-brunneis, 160-180 × 110-150; ascis fusiformibus v. clavatis, breviter stipitatis 73-80 × 21-25, octosporis; sporidiis distichis, ellipsoideis inaequaliter bilocularibus, 23-28 × 10-12, intus granulosis, loculo majori 1-guttulato; paraphysibus nou observatis.

Hab. in foliis Phyllostachydis (Graminaceae), Kumasaca, Komaba, Tokyo, Japonia.— Ob sporidia bilocularia ad Guignardiam non referenda species.

68. Sphaerella saccharoides Peck, N. Y. State Mus. Bull. 167, 1912, 6160 p. 48 (1913). — Maculis definitis, oblongis, 0,5-1 cm. longis, margine brunnescentibus; peritheciis epiphyllis, minutis, nigris; ascis subcylindraceis, 70-80 × 12-14; sporidis distichis, oblongis vel subfusiformibus, ad septum constrictis, 4-guttulatis, hyalinis, 25-30 × 5-6.

Hab. in foliis Sacchari officinarum (Graminaceae), in ins. Cuba (Thurston). — Affinis Sph. Sacchari Sp., a qua differre videtur maculis definitis albidulis, ascis et sporidiis longioribus, sporidiis quoque 4-guttulatis.

69. Sphaerella s. iatiformans N. A. Cobb, Fung. Malad. Sugar Cane, 61 Rep. Exp. Stat. Hawaij Sug. Plant. Ass. Bull. n. 5, 1906, p. 208 et pass., cum tab. et fig. 41-48; ibidem n. 6, 1909, p. 103, fig. 64 et tab. VII (Mycosphaerella).— Syll. XXII p. 145.— Peritheciis hypophyllis obscuris v. nigrescentibus, saepe in striis elongatis pal-

lidis foliorum seriatim dispositis; striis primum pallidis, dein flavidis demum aridis et albicantibus; peritheciis subglobosis 140  $\mu$  circ. er. distincte ostiolatis; ascis subcylindraceis non paraphysatis  $60 \times 13$ ; sporis subhyalinis, bilocularibus, medio constrictulis,  $15\cdot 16 \times 5.5\cdot 6.$ 

Hub. in foliis Sacchari officinarum (Graminaceae), eni noxia, in Ins. Hawai.

70. Sphaerella chlorina Sacc. et Trab. in Trabut, Etude sur l'Halfa. 616 Alger an. 1899, p. 48.— Peritheciis hinc inde dense gregariis globulosis, epidermide velatis mox erumpentibus et prominulis, punctiformibus, nigris, 60-70 μ diam. ostiolo latiusculo circulari pertusis; ascis oblongo-ellipsoideis, apice rotundatis, basi brevissime obtuse stipitato-apiculatis, 28 × 18, aparaphysatis, octosporis; sporidiis distichis, medioque tristichis, oblongis v. interdum subclavulatis, utrinque obtusulis, 10 × 4, chlorinis, 1-septatis non constrictis.

Hab. in foliis emortuis Stipae tenacissimae (Graminaceae), Meckeria, Sud Oran., Algeriae.— Peraffinis Sph. graminis, a qua defectu Asteromatis, sporidiis chlorinis, utrinque obtusulis, ascis paullo amplioribus distingui potest; an tamen ejus status provectior.

71. Sphaerella graminis Sacc., Bull. Soc. Bot. it. 1913, p. 152, Ann. 61 Mycol. XI, 1913, p. 566. — Peritheciis gregariis, punctiformibus, oculo nudo fere inconspicuis, epidermide velatis et vix erumpentibus, 70-80 μ diam., globulosis, nigris, hyphis sensim evanescentibus Asteromatis graminis cinctis, ostiolo minuto pertusis; contextu minute celluloso fuligineo; ascis rosulatis, 7-12 in quoque perithecio, obovatis apice rotundatis, ob pedicellum brevissimum basi apiculatis, octosporis, aparaphysatis, 22-25 × 14; sporidiis medio tristichis, breviter fusoideis, utrinque acutulis, rectis, medio 1-septatis, non constrictis, 12-14 × 4-4,6, hyalinis.

Hab. in foliis putrescentibus Stipae tenacissimae (Graminaceae), Tripolitaniae pluribus locis.— Obs. Semper occurrit una cum Asteromate graminis West., quod videtur status infans Sphaerellae.

72. Sphaerella hordicola Hara in Tsuruda, Journ. of Plant Protection 61 3.7, 1916, p. 532; Mycologia IX, 1917, p. 169 (Mycosphaerella). — Peritheciis parvis, nigris, globulosis, 297 × 212 v. 255 × 212; ascis irregulariter cylindricis v. quandoque conoideis, octosporis; sporis hyalinis, fusoideis utrinque obtusis, 7-15 × 2,7-3,5, bilocularibus, contentu granuloso.

Hab. in foliis culmisque vivis Tritici, Hordei (Graminaceae) et «naked barley», in Japonia pluribus locis; valde noxia (S. Tsuruda, T. Okada).— A Myc. Hordei Karst. forma et magnitudine sporarum diversa.

73. Sphaerella Guttiferae L. E. Miles, Trans. III. Ac. of Sc., v. X, 1917, 6165 p. 250 (Mycosphaerella). — Maculis epiphyllis subirregularibus 1,5-2 cm. latis primum salmoneis senescendo-cinereo-membranaceis, margine elevato zonulis alternatim obscuris et pallidis circinantibus limitato; peritheciis epiphyllis numerosis, nigris erumpentibus sparsis 80-110  $\mu$  latis, ostiolo 20-25  $\mu$  diam. praeditis; ascis ovatis v. late clavatis, 55-65  $\approx$  17; sporidis leniter fusoideis, uniseptatis, inordinatis, hyalinis, loculo inferiore parum angustiore,  $24 \approx 4$ -5.

Hab. in foliis vivis Clusiae Gundlachii (Guttiferae), Maricao Porto Rico, Amer. Centr.— A M. Clusiae differt caracteribus macularum nec non sporidiis latioribus.

74. Sphaerella Clusiae F. L. Stevens, Trans. Illin. Ac. of Sc., v. X, 6166 1917, p. 181 (Mycosphaerella). — Maculis amphigenis centro 3-8 mm. diam. e griseo-cinereis nigris area roseola cinctis, 3-5 mm. lat.; peritheciis numerosis primum epidermide tectis dein erumpentibus 40-80 μ diam.; aseis numerosis octosporis, 44-48 × 14, non paraphysatis; sporidiis inordinatis, 1-septatis, hyalinis, 14 × 4.

Hab. in foliis Clusiae roseae (Guttiferae), Maricao, Lajas, Utuada, Mayaquez, in Porto Rico, Amer. Centr.

75. Sphaerella Helodis A. L. Smith et Ramsb., Trans., Br. Mycol. Soc. V 6167 (1917) p. 423.— Peritheciis epiphyllis, nigris, confertis, subglobosis, parum immersis, 100-150 μ diam. poro pertusis; ascis oblongis breviter stipitatis, 8-sporis, 45 × 7-8, paraphysibus nullis; sporidiis biseriatis, stipatis, oblongo-fusiformibus, leniter curvatis, 1-septatis, non constrictis, hyalinis, 15-18 × 2-3.

Hab. in foliis languidis Hyperici Helodis (Guttiferae), New Forest, Britanniae.

76. Sphaerella Iridis Auersw., Syll. I p. 524 et XXII p. 143.— var. 6168 ancipitella Sacc., Ann. Mycolog. XI, 1913, p. 15. — Peritheciis hinc inde in greges minutos ovato-oblongos, 2 mm. long. 0,5 mm. latos longitudinaliter seriatos digestis, punctiformibus, hypophyllis, perexiguis, 48-60 μ diam., brunneis, poro irregulariter dehiscentibus; ascis obovatis, subinde ovato-oblongis, basi breviter tenuatis apice rotundatis, 32-38 × 20, octosporis; sporidiis subtristichis, oblongis, utrinque obtusulis, 1-septatis, lenissime constrictis 2-guttulatis, 16-17 × 6, hyalinis.

Hab. in foliis languidis I r i d i s P s e u d a c o r i (Iridaceae), pr. Parisios, Galliae (HARIOT). — Fructificatione cum typo convenit, dispositione vero quasi insulari peritheciorum cum Sphaerella Iridis var. ancipiti Sacc. congruit.

77. Sphaerella Trochicarpi Rehm, Ann. Mycol. XI, 1913, p. 390 (My. 6164 cosphaerella). — Perithecia in medio dealbato papyraceo, 3-5 mm. lato, orbiculari macularum utriusque foliorum paginae ferrugineosanguinearum, 5-12 mm. lat., plerumque oblongo-orbicularium, gregaria plurima innata, mox emergentia, globulosa, nigrofusca, membranacea, 100 μ diam. Asci fusiformiter clavati, lata basi sessiles, apice rotundati incrassatique, c. 30 × 12, 8 spori. Sporae subclavatae, utrinque rotundatae, medio septatae, non constrictae, hyalinae, rectae, 15 × 4, distichae, interdum utrinque biguttulatae. Paraphyses nullae.

Hab. ad folia Trochicarpi (? Iridaceae), Batum (Caucasia ross.) (NEWODOWSKI).

78. Sphaerella convexula (Schw.) Thüm. — Syll. 1 494 — Teste F. V. 6170 Rand (Phytopathology, I, 1911, p. 135, c. ic.) diagnosis sie integratur: Peritheciis plerumque hypophyllis, in greges irregulares dense confertis vel per totum folium sparsis, immersis dein erumpentibus, minutis, sphaerioideis, nigris, 100-200 μ diam. interdum rugulosis, ostiolo papillulato praeditis; ascis fasciculatis, cylindraceo-clavatis, subsessilibus, aparaphysatis, octosporis, 54-100 × 9-11; sporidiis oblongo-fusoideis, saepe allantoideo-curvatis, medio septatis, ad septum non vel vix constrictis, hyalinis, 13-27 × 3,5-5,5.

Hab. in foliis vivis C ary a e spp. (Juglandaceae), etiam in Statibus Unitis meridionalibus.

79. Sphaerella saccardoana Jaap, Ann. Mycol. 14., 1916, p. 12 (My-6171 cosphaerella). — Peritheciis hyphophyllis, in maculas minutas, angulosas, 0,5 mm. latas dense confertis, perexiguis, depresse globosis,  $50.75~\mu$  diam.; ascis fasciculatis, oblongo-clavatis, sessilibus, apice rotundatis,  $50 \times 12$ , octosporis, aparaphysatis; sporidiis oblique distichis, fusoideis, medio 1-septatis leniterque constrictis, pluriguttulatis,  $20.22 \times 3.5.5$ , hyalinis.

Hab. in foliis emortuis, siccis, praeteriti anni, Juglandis regiae (Juglandaceae), socia Septoria letendreana, prope Castelnuovo, Dalmatiae.

80. Sphaerella haraeana Sydow, Annales Mycologici XI, 1913, p. 59 6172 (Mycosphaerella).— Peritheciis hypophyllis, non maculicolis, irregulariter aggregatis, immersis, vertice prominulis globulosis, 60-85 µ

diam., pertusis, atris, contextu submembranaceo, fere opaco; aseis eylindraceo-clavatis v. clavatis, fasciculatis, aparaphysatis, apice obtusis, 30-40 × 8-10, octosporis; sporidiis oblongis, medio 1-septatis, non constrictis, rectis v. leniter curvulis, 12-17 × 3.

Hab. in foliis emortuis Pteroearyae sp. (Juglandaceae), Kawauye-mura prov. Mino, Japoniae (K. Hara).

81. Sphaerella vogesiaca Sydow, Mycoth. germ. fasc. XX n. 979, Ann. 6173 Mycol. IX, 1911, p. 556. — Peritheciis gregariis, immersis, sphaeroideis, atris, 40-60 μ diam., poro simplici 10-15 μ lato pertusis; ascis oblongo clavatis v. clavato-saccatis, subsessilibus, octosporis, 30-40 × 10-15, fasciculatis, aparaphysatis; sporidiis plerumque tristichis, oblongo-fusoideis, cellula una plerumque paullo latiore, primo 2-4-guttulatis, medio 1 septatis haud vel vix constrictis hyalinis v. subchlorinis, utrinque obtusis, 10-12 × 2-3,5.

Hab. in calamis Junci conglomerati (Juncaceae), Hohneck, Vogesorum, Germania. — A coeteris speciebus peritheciis sporiisque parvis diversa.

82. Sphaerella Phlomidis Bubak et Frag., Hedw. LVII, p. 4 (1915).— 6174 Peritheciis sparsis, epidermide tectis, globosis, 130-160 μ diam., basi applanatis, apice conico erumpentibus, atris, contextu crassissimo parenchymatico atro-castaneo; ascis oblongo clavatis v. oblongo-cylindraceis, 55-65 × 15-18, sursum attenuatis, apice rotundatis et valde incrassatis, breve pedicellatis, 8 sporis, aparaphysatis; sporidiis basi tristichis, supra distichis, oblongo-ovoideis, 15-20 × 5,5-7, medio 1-septatis, non constrictis, loculo sup. latiore, hyalinis.

Hab. in caulibus calycibusque emortuis Phlomidis purpur e a e (Labiatae), prope Pedroso de la Sierra, Hispaniae (Gz. Fragoso).— A speciebus in Labiatis praesertim ascis valde crassis dignoscenda.

83. Sphaerella polygramma (Fr.) Niessl. — Syll. II p. 521. — Var. Ca-6175 ruanae Sacc., Nuovo Giorn. bot. it. N. S. v. XXII, 1915, p. 35.— Peritheciis globosis minimis, 65-75 μ diam., contextu sinuoso-parenchymatico, olivaceo fusco; ascis clavatis, 35 × 9-10; sporidiis breve fusoideis, 10-11 × 3,6.

Hab. in ramulis siccis T e u c r i i f l a v i (Labiatae), Imghieret, Insula Melita.— A typo differt peritheciis dense gregariis sed non distincte seriatis, perexiguis, matrice vix fusco-maculata.

84. Sphaerella Perseae L. E. Miles, Trans. Ill. Ac. of Sc., v. X, 1917, 6176 p. 251 (corr. Persiae); Phytopathology, v. 7., 1917, n. 5 p. 350 (Mycosphaerella).— Maculis amphigenis, forma et magnitudine valde varia-

bilibus, in epiphyllo cinereo membranaceis indefinitis, in hypophyllo brunneis zonula obscuriori marginatis; peritheciis epiphyllis parum depressis, nigris, sparsis, parum numerosis, 70 × 80-100, ostiolatis: ostiolo lenissime elevato 15-25 u diam.; ascis aparaphysatis oblanceolatis v. anguste clavatis 45-55 × 7-9; sporidiis hyalinis uniseptatis, cylindraceis medio modice constrictis, monostichis v. subdistichis, utrinque leniter acutatis, 12-13 × 3-4.

Hab. in foliis vivis Perseae americanae (Lauraceae), pluribus locis in Porto Rico, Amer. Centr. — A M. exutanti differt maculis majoribus sporidiis in medio uniseptatis etc.

85. Sphaerella Argyrophylli Bubàk in Ann. Naturh. Hofmus. Wien, 6177 XXVIII (1914) p. 197. -- Peritheciis sparsis, globosis, apice conice protractis, 150-200 µ diam., subepidermicis dein nudis, ostiolo papillato-conoideo, excipulo crasso, contextu grosse pseudoparenchymatico, atro-fusco; ascis ovoideo-oblongis, apice attenuatis, basi breviter pedicellatis, crasse tunicatis, aparaphysatis, octosporis, 48-60 × 19-25; sporidiis infra 3-stichis supra 2-stichis, ovoideo-oblongis, uniseptatis, hyalinis, utrinque rotundatis, 17-19 \$ 5,5-7,5, loculo superiore latiore.

Hab. in rhachidibus fol. Astragali argyrophylli (Leguminosae), prope vici ruinas Gharra in Mesopotamia.

86. Sphaerella Jaczewskii A. Potebnia, Micromyc. Charkow in Trav. 6178 Soc. Natur. Univ. Imp. Charkow, t. 43., 1909, p. 214 (Mycosphaerella), cum icon. (descriptio rossica). - Peritheciis amphigenis subsuperficialibus phyalaeformibus, nigris, 120-140 × 150-170, ostiolo papilliformi praeditis; ascis subclavatis, basi v. medio inflatis, 55-70 × 12-14; sporis sine ordine dispositis v. hinc inde irregulariter congestis et tunc ascis forma variabilibus; sporis secundum maturitatem magnitudine variabilibus, tunc 21.23 × 5.6, tunc 14.17 × 3,5-4 tune majoribus usque 28 × 8, medio septato-constrictis et loculo inferiori parum angustiori.

Hab. in foliis Caraganae arborescentis (Leguminosae), prope Charkow Rossia. -- Socia adest Phleospora Caraganae.

87. Sphaerella phaseolorum Siemaszko, Materialy po mikologi i fito- 6179 patologii Rossii, v. III, Petersburg 1915. Extr. p. 5, fig. 1 (Mycosphaerella). - Maculis albidis, linea atra cinetis, peritheciis erumpenti superficialibus, obscure brunneis, 70-120 µ diam., poro lato pertusis; ascis claviformibus rectis v. curvatis ad basim fasciculatis 35-60 \* 14-16; sporidiis distichis rectis v. curvulis medio uniseptatis constrictis, hyalinis,  $10.12 \approx 6.7$ .

Hab. in foliis languescentibus Glycines sojae, Phase oli Mungoi, Vignae rubrae (Leguminosae), Suchum-Kale, Abchazia, Rossia merid.—Sphaerellae phaseolicolae (Desm.) Sacc. proxima videtur.

88. Sphaerella ontariensis R. E. Stone, Phytopath. V (1915) p. 6, fig. 1–6180 (Mycosphaerella).— Peritheciis erumpentibus, subsuperficialibus, globoso-papillatis,  $50\text{-}100 \approx 70$ , ostiolo brevi pertusis; ascis oblongo-cylindraceis, sessilibus vel breviter stipitatis, apice foveolatis,  $45\text{-}50 \approx 12\text{-}14$ ; sporidiis oblique monostichis, medio septatis, leniter constrictis, apice acutis, loculis biguttulatis, hyalinis,  $10\text{-}12\text{-}5 \approx 5\text{-}6$ . Status pyenidicus Ascochyta ontariensis.

Hab. in foliis, caulibus fructibusque emortuis Lathyri sativi (Leguminosae), Guelph, Ontario, Amer. bor.

89. Sphaerella lethalis R. E. Stone, Ann. Mycol. X, 1912. p. 587, tab. 6181 XIX fig. 24-31, tab. XX fig. 56,60 (Mycosphaerella). — Peritheciis brunneis cortice innatis v. saltem epidermidem tectis globosis 96-160 μ diam., ostiolo centrali breviter rostellato et leviter prominente; ascis cylindraceis v. cylindraceo-clavatis, 65-80 × 14-16, vertice incrassatis, et poro praeditis; sporidiis hyalinis, bicellularibus ellipsoideis, ad septum leviter constrictis, utrinque acutiusculis, 13-19 × 7-9; cellulis denique biguttatis.

Hab. in caulibus vivis et emortuis Meliloti albae et M. officinalis (Leguminosae), Ithaca, New York, Amer. bor.—Status ascophorus Ascochytae lethalis quam confer.

90. Sphaerella Mucunae F. L. Stevens, Trans. III. Ac. of Sc., v. X, 1917,  $_{6182}$  p. 182 (*Mycosphaerella*). — Maculis irregulariter circularibus, siceis, 1-2 cm. diam., rugulis concentricis 2 mm. cr. signatis; peritheciis, numerosis, nigris, 78-94  $\mu$  diam., distincte ostiolatis; ascis octosporis,  $34-40 \approx 8-10$ ; sporidiis longis et angustis,  $17-20 \approx 3$ , 1-septatis obtusis.

Hab. in foliis Mucunae prurientis (Leguminosae), Añasco Porto Rico, Amer. Centr.

91. Sphaerella Mycopron N. Patouillard, Bull. Soc. Mycol. de Fr., 6183 XXXVI, 1920, p. 177. — Maculis nullis; peritheciis globuloso-depressis, circ. 90 × 75, basi epidermide immersis, nigris, hinc inde gregariis, hypophyllis; parietibus brunneis, coriaceis, subparenchymaticis; ascis ellipsoideis, subsessilibus, aparaphysatis, 21-30 × 15, octosporis; sporidiis hyalinis viridibus, ellipsoideis, uniseptatis, 6-9 × 4-5.

Hab. in foliis vivis Phaseoli culti (Leguminosae), Cho-

Ganh, Tonkin (DUPORT). — A Sph. Morieri et phaseolicola magnitudine peritheciorum etc., maculis nullis diversa.

92. Sphaerella Robiniae Siemaszko, Bull. f. angew. Bot. 6., St. Peter-618 sburg 1913, p. 712, fig. 621, 625 (Mycosphaerella). — Peritheciis hypophyllis, immersis, rotundatis, contextu pseudoparenchymatico praeditis, pallide brunneis; ascis oblongo-clavatis, 33 × 9, saepe curvatis; sporidiis subdistichis, uniseptatis, hyalinis, uno apice tenuatis, 12-15 × 3.

Hab. in foliis Robiniae Pseudoacaciae (Leguminosae), distr. Smela, gub. Kiew, Rossia.

93. Sphaerella Pseudo-acaciae Auersw. — Syll. I, p. 490 — Saccardo, 6185 Notae Myc. XXV, in « Madonna Verona » 1918, p. 5.

Hab. in fol. morientibus R o b i n i a e P s e u d o · a c a c i a e (Leguminosae), Tregnago, Verona, Italia bor.— Perithecia hinc inde in soros conferta, S0-100  $\mu$  diam., poro rotundo pertusa; asci 60  $\times$  11-12; sporidia disticha, fusoidea, 12-18  $\times$  6, rarius usque ad 21  $\times$  7, hyalina.

94. Sphaerella halcanica Bubàk, III. Beitr. Pilz. Montenegro, in Botanikai Kózlemények, 1915, p. (56).—Maculis utrinque visibilibus, linearibus, inter nervos laterales positis et limitatis, supra brunneis, infra brunneo-griseis, utrinque obscurius marginatis, transverse confluentibus et demum magnam partem folii occupantibus. Peritheciis hypophyllis, laxe gregariis, globosis, 50-100 μ in diam., brunneis, epidermide tectis eamque hemisphaerice elevantibus, apice conico, perforato parum erumpentibus, contextu tenui, pseudoparenchymatico, grosse celluloso, brunneo; ascis fasciculatis, oblongis vel oblongo-obelavatis, 30-40 × 8-9, apice rotundatis, non incrassatis, basi brevissime pedicellatis, aparaphysatis, octosporis; sporidiis distichis vel basi tristichis, fusoideis vel oblongo-clavatis, 11-13 × 3-4, rectis vel curvatis uniseptatis loculo inferiore angustiore, utrinque attenuatis, hyalinis, guttulatis.

Hab. in foliis vivis Trifolii medii subsp. balcanici Vel. (Leguminosae), in Bozur planina (distr. Piva) ca. 1700 m., Montenegro (ROHLENA).

95. Sphaerella Trifolii Karst. — Sacc. Syll. I p. 514. — f. Trifolii to- 6187 mentosi Gonz. Frag., Microm. de Melilla, in Mem. Soc. Espan. Hist. Nat. t. VIII, 1916, p. 339. — Peritheciis sparsis, globoso-conoideis, usque 150  $\mu$  diam. ostiolo prominulo papillulato; ascis sessilibus amplioribus usque  $70 \times 24$ , parietibus crassis, clavatis, ascosporis distichis vel subtristichis usque  $24 \times 8$ , 1-septatis ad septum leniter

constrictis, loculis inaequalibus, hyalinis nebulosis guttulatis.

Hab. in foliis caulibusque Trifolii tomentosi (Leguminosae), prope Melilla Gurugù, Marocco. - Socia Phyllachorae Trifolii. St. conid. et strom. immaturis. A caeteris Sphaerellis in Trifolio indicatis diversa.

96. Sphaerella coymiana Jaap, Ann. Mycol. XII, 1914, p. 11 (Myco. 6188 sphaerella). - Peritheciis gregariis, minutis, punctiformibus erumpentibus epiphyllis, nigris, globosis, 120-180 µ cr., ostiolo depressoconoideo, 8-10 µ lato, praeditis, contextu parenchymatico; ascis clavatis, rotundatis, 40-60 \* 10-12, octosporis, aparaphysatis; sporidiis irregulariter distichis elongato-obovoideis, bilocularibus, medio constrictulis, hyalinis, 11-12 μ long., loculo superiori 5 μ inferiori 4 µ lato.

Hab. in caulibus Viciae pisiformis (Leguminosae), Johannisberg prope Bad Nauheim, Germania. - Sph. Viciae Schr. et Sph. Orobi Hazl. omnino diversae.

97. Sphaerella dealbans Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 6189 Cienc. Cordoba t. 23., 1919, Extr. p. 107. — Maculis nullis sed matrix tota decolorata ochroleuca; peritheciis primo epidermide tectis dein erumpentibus, minutis, sparsis v. laxe aggregatis, subglobosodepressulis, 60-75 \( \mu \) diam., glaberrimis atris, late ostiolato-pertusis (10 \mu diam.), membranaceis, contextu grosse parenchymatico olivaceo-fuligineo; ascis obclavatis, 40 × 7-8, apice obtuse rotundatis crassiusculeque tunicatis, deorsum abrupte cuneatis in pedicellum crassum brevissimumque productis, aparaphysatis octosporis; sporidiis sublineari-clayulatis, medio 1-septato-constrictulis, loculis subaequilongis, supero anguste ellipsoideo, infero e cylindraceo obconico, levibus, hyalinis, 12 \* 3.

Hab. in scapis floralibus emortuis siccis Agapanthi umb e l l a t i (Liliaceae), in hortis prope Apiahy, Brasilia, America Austr. — A Sph. Agapanthi Klkbr. et Cke. diversa.

98. Sphaerella cordylinicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6190 Buenos Aires XXIII p. 51 (1912). - Maculis difformibus, angulosis, repandulis, 3-15 mm. latis, cinerascentibus, fusco-marginatis; peritheciis amphigenis, late gregariis, innato-erumpentibus, coriacellis, minutis, subglobosis, 120-130 \mu diam., ostiolo non papillato praeditis, contextu atro grosse parenchymatico; ascis subfusoideis, breviter pedicellatis, aparaphysatis, 40 × 8; sporidiis oblique distichis, e fusoideo subclavulatis, utrinque acutiusculis, interdum leniter inaequilateris, ad septum constrictis, hyalinis, 12-15 \times 3-4, loculis

aequilongis, minute biguttulatis, superiore saepius leniter turgidiore. Hab. in foliis languidis Cordylinis dracaenoidis (Liliaceae), in silvis prope Bompland, Misiones: Argentina.

99. Sphaerella Hostae Sydow, Annales Mycologici XI, 1913, p. 59 6191 (Mycosphaerella). — Peritheciis amphigenis vel petiolicolis, non vel vix maculicolis, irregulariter sparsis v. aggregatis, minutis, globosis, 60-85 μ diam., atris, poro pertusis, immersis, vertice erumpentibus, membranaceis, contextu parenchymatico fuscidulo ex cellulis 5-7 μ diam. composito; ascis fasciculatis, aparaphysatis, clavatis v. clavato-saccatis, apice obtusis, 30-40 × 7-10, octosporis; sporidiis distichis, elongato-ovatis v. oblongis, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 10-12 × 3-3,5, loculo supero parum latiore quam infero.

Hab. in foliis et petiolis Hostae japonicae (Liliaceae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

100. Sphaerella pellucida Bubàk et Dearness in Bubàk, Hedwigia, 58. 6192 p. 15 (1916). — Maculis utrinque visibilibus, dispersis rotundatis, 4-6 mm. latis, albidis vel luteis, aridis, lateritio-vel brunneo-marginatis; peritheciis epiphyllis, crebris gregariis, immersis, epidermide tectis, globoso-applanatis, 80-180 μ in diam., brunneis, poro apertis, parietibus tenuibus, contextu flavo-brunneo, pseudoparenchymatico grosse et tenuissime celluloso; ascis oblongo-clavatis (sporidiis distichis), 45-55 μ longis 10-13 μ latis vel ovoideo-clavatis (sporidiis tristichis), 40-50 μ longis, 15-18 μ latis, rectis vel curvatis, apice rotundatis basi breve pedicellatis, aparaphysatis, octosporis; sporidiis distichis vel tristichis, oblongis vel fusoideis, 17-25 μ longis, 4-7,5 latis, rectis vel curvatis, uniseptatis, non constrictis, utrinque attenuatis vel attenuato-rotundatis, hyalinis.

Hab. in foliis vivis Smilacis herbaceae L. (Liliaceae), Cauda: London Ont., Amer. bor. (J. DEARNESS).

101. Sphaerella Veratri v. Höhn., Fragm. z. Mykol. 848, in Stzgsb. 6193 Akad. Wiss. Wien CXXIII, 1, p. 108 (1914) (Mycosphaerella). — Peritheciis hypophyllis, subepidermicis, in utraque pagina visibilibus, dense gregariis, totum folium occupantibus, atris, globosis, 120-190 μ diam., ostiolo circulari usque ad 28 μ lato, excipulo grosse pseudoparenchymatico atro-brunneo; ascis copiosissimis, ultra 100, fasciculatis, sessilibus, clavulatis, aparaphysatis, octosporis, 44 × 7-8, crasse tunicatis, jodi ope rubentibus; sporidiis oblongoconoideis vel subcylindricis, hyalinis, loculo superiore plerumque paullo breviore et latiore, 8-10 × 2,5-3.

Hab. in foliis siccis albicatis Veratri albi (Liliaceae), Anninger, Wienerwald, Austria.

102. Sphaerella yuccina Woronichin, Monit. Jard. Bot. Tiflis, XXVIII 6194 (1913) p. 16, tab. 1 fig. 1 (Mycosphaerella). — Maculis albidis, circularibus, usque ad 5 mm. diam., vel ovalibus et tunc usque ad  $10 \times 5$  mm., amphigenis, sparsis; peritheciis epiphyllis, atris, 120-180  $\mu$  diam., plerumque concentricis; ascis cylindraceis, apice rotundatis, brevissime pedicellatis,  $85-90 \times 15$ , aparaphysatis; sporidiis fusoideis, hyalinis,  $18-20 \times 4,5-5$ , fere distichis.

Hab. in foliis vivis Yuccae gloriosae (Liliaceae), Tiflis, Caucaso (E. Koenig).

103. Sphaerella drobnjakensis Bubàk, III. Beitr. Pilz. Montenegro, in 6195 Botanikai Közlemények, 1915, p. (56). — Peritheciis dispersis vel gregariis, epidermide nigrogrisea tectis, globosis vel parum applanatis, 100-200 μ in diam., contextu crasso, fuscocastaneo, pseudoparenchymatico, apice conico erumpentibus; ascis fasciculatis, oblongo-clavatis vel oblongo-cylindricis, 50-80 μ longis, 13-20 μ latis, sursum attenuatis, apice valde incrassatis, basi breve pedicellatis, octosporis aparaphysatis; sporidiis tristichis, subtristichis vel distichis, oblongo-clavatis, 14-20 × 4-5, rectis, medio uniseptatis, loculo superiore crassiore, hyalinis.

Hab. in caulibus emortuis Lini la evis (Linaceae), Dobrido, Montenegro.— var. confinium Bubàk, l. c., a typo differt ascis 20-26  $\mu$  latis, sporidiis 24-28  $\approx$  6-7,5.— Hab. in caulibus emortuis Lini la evis, M. Maglic ad fines Hercegovinae.

104. Sphaerella Loranthi Sydow, Annales Mycologici XII, 1914, p. 6196 264 (Mycosphaerella). — Peritheciis amphigenis, in greges orbiculares 3-5 mm. diam. dense congestis profunde immersis, vertice tantum prominulis, globulosis, 80-120  $\mu$  diam., contextu dilute olivaceo parenchymatico ex cellulis 6-9  $\mu$  latis composito; ascis fasciculatis, primo ovatis, dein elongatis, saepe saccatis ad apicem valde incrassatis, 60-85  $\times$  18-24, octosporis; paraphysibus genuinis nullis; sporidiis distichis, cylindraceis, medio septatis et subinde leniter constrictis, utrinque late rotundatis, hyalinis, 24-26  $\times$  7-8.

Hab. in foliis Loranthi Dregei (Loranthaceae), Nelsprint Transvaal, Africa austr. (P. v. d. Bijl.).

105. Sphaerella ditissima Sydow, Annales Mycologici XII, 1914, p. 6197 55 (Mycosphaerella). — Peritheciis maculiformiter aggregatis, mycelio copiose evoluto, in maculis griseis v. griseo-fuscidulis insidentibus, globulosis, 80-110 μ diam., innatis, ostiolo minuto pro-

minulis, atris, contextu subopaco ex cellulis 7-9 µ diam, parenchymatice composito; ascis sessilibus, fasciculatis, aparaphysatis, saccatis v. fusoideo-saccatis, apicem versus angustioribus, 35-50 × 10-12. octosporis: sporidiis di-tristichis, oblongo-fusoideis, sed apicibus obtusis, rectis v. leniter inaequilateris, medio 1-septatis, non constrictis, hyalinis v. subhyalinis, 16-19 × 2-3.

Hab. in foliis languidis Lycopodii flexuosi (Lycopodiaceae), Pauai prov. Benguet, Luzon, Ins. Philipp. (E. B. COPELAND).— A M. lycopodina (Karst.) Schr. maculis mycelicis et sporidiis medio septatis diversa.

106. Sphaerella perconferta Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. 6198 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 168. - Maculis amphigenis repando orbicularibus, 5-30 mm. diam., cinereis, determinatis, areola determinata ferruginea cinctis; peritheciis parenchymate innatis, epiphyllis, epidermide tectis, numerosissimis, constipatis sed non confluentibus, globulosis, 150-180 µ diam., pertusis; ascis obelavatis, apice obtuse rotundatis, breviter crasseque pedicellatis, octosporis, aparaphysatis, 50-60 × 14-15; sporidiis linearibus subfusoideis, utrinque acutiusculis, medio 1-septatis non v. vix constrictulis, hyalinis, 18 \* 4.5.

Hab. in foliis vivis Drimydis? (Magnoliaceae), prope Apiahy, Brasiliae, America austr. (J. Puiggari). — A Sph. Drimydis (Brk.) Sacc. differt peritheciis numerosis confertisque sporidiis majoribus.

107. Sphaerella Stigmophylli Rang., Fung. do Bres. in Arch. Mus. Nac. 6199 Rio Jan. 1917 p. 161 t. VI p. 7.9 (Mycosphaerella). — Maculis amphigenis orbicularibus 3-8 mm. diam. testaceis, linea tenui brunnea minute sinuoso-denticulata limitatis; peritheciis praecipue hypophyllis, membranaceis, innatis, globulosis v. subglobosis, glabris, tectis deinde leniter erumpentibus, ostiolo pertusis, vix papillatis, atris, 60-80 µ diam.; ascis fusoideis saepius incurvatis, apice cuneatis incrassatisque, 8-sporis, pedicellatis, aparaphysatis, 36-45 \*12-15; sporidiis fusoideis, utrinque obtusis, 1-septatis, non v. leniter constrictis in cellulas inaequales divisis, conglobatis, chlorinis, granulosis,  $12-16 \approx 2,5-3,5$ .

Hab. in foliis vivis Stigmophylli ciliati (Malpighiaceae), Icarahy pr. Niteroy, Brasiliae.

108. Sphaerella Pericampyli Syd., Enum. Philipp. Fungi I, in Philipp. 6200 Journ. of Sci. VIII (1913) p. 270 (Mycosphaerella). - Maculis distinctis, circularibus vel irregularibus, 0,25-1,5 cm. latis, centro demum exaridis, margine elevato purpureo cinctis; peritheciis nu-

merosis in quaque macula, epiphyllis, applanato-globulosis, 60.90 μ diam., poro circ. 15-25 \mu lato pertusis, atris, contextu subopaco fusco, circa porum obscuriore, indistincte parenchymatico; ascis cylindraceo clavatis, fasciculatis, aparaphysatis, 35.45 × 9-13; sporidiis distichis, oblongo-fusoideis, rectis vel subrectis, utrinque obtusis, medio septatis, non constrictis, hyalinis, 12-15 × 3-4.

Hab. in foliis vivis vel languidis Pericampyli incani (Menispermaceae), Luzon, Prov. Laguna, ins. Philipp.

109. Sphaerella bolleana B. B. Higgins, Amer. Journ. of Bot. 7., 1920, 6201 p. 443, cum icon. (Mycosphaerella). — Peritheciis plerumque hypophyllis, sparsis semi-immersis, erumpentibus, nigris, 60-105 > 55-95, ostiolo papillato praeditis; ascis e cylindraceis clavatis, brevissime stipitatis aparaphysatis, 35-40 × 11, octosporis; sporidiis hyalinis, clavatis, 17-20 × 3,5-5,5, uniseptatis. - Spermogoniis autumno efformatis, hypophyllis, innato-erumpentibus, punctiformibus, nigris, ovatis, 40-90 × 30-70; spermatiis minutis cylindraceis, 2-3 × 1, hyalinis. - Status conidicus (Cercospora bolleana (Th.) Speg.): maculis brunneis v. olivaceo-fuscis, irregularibus, 2-5 mm. lat. interdum subeffusis; hyphis hypophyllis, solitariis aut fasciculatis, apice geniculatis, continuis v. septatis, 50-90 × 5-6; conidiis clavatis v. tereti-fusoideis  $32-53 \times 6-8$ , apice obtusioribus, chlorino-olivaceis, 1-5septatis.

Hab, in foliis dejectis, status conidicus in foliis vivis, Fici caricae (Moraceae) in Amer. bor.

110. Sphaerella Musae Sacc., Notae Myc. XXIII (Accad. Veneto-trent. 6202 1917 p. 67). -- Maculis vagis, expallescentibus, indeterminatis; peritheciis punctiformibus gregariis, globoso-lenticularibus, subcutaneo-erumpentibus, 150-180 μ diam, ostiolo rotundo 20-25 μ diam. pertusis; contextu obsolete, angustė celluloso, nigricante; ascis fasciculatis, aparaphysatis deorsum tenuatis, apice obtusulis, 45-50 \$ 7,5-9, octosporis; sporidiis oblique monostichis v. distichis, fu. soideis, utringue obtuse tenuatis, 10-12 × 2,3-2,5, hyalinis, 1-septatis, diblastis v. 4-guttulatis, non v. vix constrictis

Hab. in caulibus emortuis Musae coccineae (Musaceae), Los Baños, Ins. Philipp. (BAKER).

111. Sphaerella Bryii Gonz. Frag., Flor. Hispal. Microm., in Trab. 6203 Mus. Nac. de Cienc. Nat. Madrid, Ser. Bot. n. 10, 1916, p. 78.— Peritheciis numerosis, sparsis vel gregariis, immersis, dein emergentibus, globosis, 50 × 100 diam., brevi papillulatis, poro minuto pertusis, contextu atro-fusco pseudo-parenchymatico; ascis ovoideo-

obelavatis, subsessilibus,  $30-35 \times 12-17$ , apice attenuato-rotundatis parietibus crassis, aparaphysatis, octosporis; sporidiis subdistichis vel conglobatis, ovato-oblongis,  $10-12 \times 3,5-4$ , hyalinis, 1-septatis, loculo uno latiore, altero attenuato, uno alterove rotundatis.

Hab. in capsulis emortuis Bryii capillaris var. meridionalis (Musci), prope Pedroso de la Sierra, Sevilla, Hispania.—
Sphaer. Tortulae Bubàk et Fragoso, proxima sed diversa.

112. Sphaerelia Tortulae Bub. et Fragoso, Hedwigia, LVII p. 5 (1915).— 6204
Peritheciis sparsis, immersis, dimidio super. erumpentibus, globosis, 60-100 μ diam., apice initio poro apertis, demum late hiantibus, contextu sursum valde incrassato grosse parenchymatico atro-fusco; ascis ovoideo-obelavatis, 30-35 × 10, sursum attenuatis apiceque rotundatis, brevissime pedicellatis, 8 sporis, aparaphysatis; sporidis conglobatis v. tristichis, oblongis, 9-11 × 3-3,5, medio 1-septatis, non constrictis, loculo super. latiore, hyalinis.

Hab. in pedicellis (setis) Tortulae pulvinatae (Musci), pr. Villalva de Los Baños, Hispania (CASARES).

113. Sphaerelia vexans Massee, Bull. Bot. Garden Kew, 1914, p. 158.— 6205 Peritheciis gregariis, globulosis, minutissimis, subepidermicis, ostiolo vix prominulo ornatis, atris, 60-70 μ diam.; ascis cylindraceis, deorsum breviter attenuato-stipitatis, octosporis, aparaphysatis; sporidiis ellipsoideis, utrinque obtuse rotundatis, medio 1-septatis, hyalinis, 8-9 × 3.

Hab. in foliis vivis Eugeniae caryophyllatae (Myrtaceae), Zanzibar (F. Mc CLELLAN).

114. Sphaerella Allioniae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6206 Buenos Aires XXIII, p. 51 (1912). — Peritheciis sparsis vel hinc inde gregariis, ligno insidentibus, epidermide non vel vix cinerascente tectis, dein, ea secedente, nudatis, subhemisphaericis, 100-120 μ diam., atris, glabris, minute ostiolo-perforatis, membranaceis, contextu grosse parenchymatico, olivaceo, circa ostiolum subopace atro; ascis ellipsoideo-clavatis, apice obtusissime rotundatis, basi breviter noduloso-pedicellatis, 80 × 25, aparaphysatis, 6-8 in quoque perithecio; sporidiis distichis, ellipsoideis, utrinque rotundatis, majusculis, valide septato-constrictis, hyalinis, 25-30 × 12-14, loculis aequilongis eguttulatis.

Hab. in caulibus emortuis aridisque Allioniae incarnatae (Nyctaginaceae), in alveo Rio Blanco, Potrerillos prope Mendoza, Argentina.

115. Sphaerella Merrillii H. S. Yates, Philipp. Journ. Sc. XII (1917) 6207

p. 376 (Mycosphaerella). — Maculis definitis, orbicularibus, 1-2 cm. diam., centro pallescentibus, margine luteis; peritheciis numerosis in quaque macula, atris, globosis, minutis, 70-100  $\mu$  diam., immersis, ostiolis epiphyllis, 5-8  $\mu$  latis, pertusis; contextu subopaco, fusco, ex cellulis 4-6  $\mu$  diam. composito; ascis cylindraceis, octosporis, 45-55  $\times$  7-10, aparaphysatis; sporidiis plerumque distichis, oblongis, utrinque rotundatis, ad medium 1-septatis, non constrictis, brunneis, 8-11  $\times$  2,5-3,5.

Hab. in foliis Erythropali sp. (Olacaceae), pr. Sangirin, Alabat, Ins. Philipp. (MERRILL).

116. Sphaerella lagunensis Sydow, Ann. Mycol. 15., 1917, p. 206 (My-6208 cosphaerella). — Perithecia amphigena, in maculis griseole decoloratis exaridis dense gregaria, tecta, 60-80 μ diam., obscure olivaceobrunnea vei atro-brunnea, minute parenchymatice contexta, membranacea, poro minuto pertusa; asci fasciculati, subsessiles, plerumque saccati v. irregulares, aparaphysati, 30-40 × 12-15, octosporis; sporae 2-3-stichae, oblongae, medio septatae, non constrictae, hyalinae, utrinque obtusae v. uno fine leniter attenuatae, 16-19 × 4,4,5.

Hab. in foliis Dendrochili sp. (Orchidaceae), Los Baños Laguna, Ins. Philipp. (C. F. BAKER).

117. Sphaerella Washingtoniae Rehm, Ann. Mycol. IX, 1911, p. 364, 6209 (Mycosphaerella). — Perithecia in maculis fuscidulis gregaria innata, dein emergentia, globulosa atra glabra, vix conspicue papillulata, membranacea, e cellulis permagnis contexta, fuscidula, 0,15 mm. diam.; ascis subfusoideis, brevissime pediculatis, saepe subcurvatis, 50-55 × 15, octosporis; sporis oblongo-subclavatis, utrinque obtusis, medio septatis, vix constrictis, utraque cellula biguttulata, hyalinis, 15-18 × 5-6, conglobatis; paraphysibus nullis.

Hab. in Washingtonia brachypoda (Palmae), Montes circa Claremont Los Angeles, California, U.S. America (BAKER et METZ). — Sph. tassianae accedens, ascis sporisque plane divergens.

118. Sphaerella Palmae L. E. Miles, Trans. Ill. Ac. of Sc., v. X, 1917,  $_{6210}$  p. 252 (Mycosphaerella).— Maculis amphigenis e parvis et ovoideis plus minus elongatis angustisque, pallide brunneis margine angusto obscuriori praeditis; peritheciis amphigenis, parvis, obscuris, aggregato-immersis, 80-90  $\mu$  diam. ostiolatis; ascis aparaphysatis, oblongis v. late clavatis, rectis,  $45\text{-}50 \approx 17$ ; sporidiis hyalinis uniseptatis non constrictis fusoideis, rectis v. plerumque curvis utrinque acutatis,  $30\text{-}35 \approx 4\text{-}5$ .

Hab. in foliis Palmarum, Guanica in Porto Rico, Amer. Centr.

119. Sphaerella Macleyae Shirai et Hara in Bot. Magaz. Tokyo, XXV 621 (1911) p. 71, tab 2 fig. 13·14 (Mycosphaerella). — Peritheciis sparsis, immersis, globosis vel hemisphaericis, apice papillatis, membranaceis, obscure brunneis, 60·110 μ diam.; ascis cylindraceis vel oblongis, subpedicellatis, octosporis, 35·45 × 8·10; sporidis distichis, raro oblique monostichis, fusiformibus, ellipsoideis vel ovatis, 1-septatis, hyalinis, 10·13 × 2·3.

Hab. in foliis Macleyae cordatae (Papaveraceae), Prov. Musashi, prope Tokyo, Japonia.

120. Sphaerella insulana Bubàk et Sydow, Ann. Mycol. XIII, 1915, 6212 p. 7 (Mycosphaerella). — Peritheciis aequaliter dispersis, applanatis, 180-250 μ in diam., nigris, parietibus tenuibus, initio subepidermicis, dein papilla brevi, conica erumpentibus, basi fere planis, contextu grosse pseudoparenelymatico, nigro-fusco; ascis late fusiformibus, 35-45 × 8-12 utrinque attenuatis, breviter pedicellatis, rectis, rarius curvulis, aparaphysatis, octosporis; sporidiis distichis, fusoideis, 10-12 × 2-2,5 utrinque attenuato-rotundatis, medio uniseptatis, non constrictis, hyalinis.

Hab. in caulibus Rumicis sp. (Polygonaceae), ad Munkmarsch in insula Sylt, Germania (H. Sydow).

121. Sphaerella punctiformis (Pers.) Starb. — Syll. I p. 476. — var. 6213 Clematidis Jaap, « Fungi sel. exsicc. » n. 770, an. 1916; Verh. bot. Ver. Prov. Brandb. 59., 1917, p. 30 (Mycosphaerella). — A typo differt praecipue sporidiis majoribus (ascis 35-60 \* 5-7, sporidiis 8-12 \* 2,5-3,5, bilocularibus plerumque ad septum constrictulis).

Hab. in caulibus siccis vetustis Clematidis Jackmannii Van Hon. (Ranunculaceae), Triglitz in Prignitz, Germania.

122. Sphaerella salvatorensis Jaap, Annal. Mycol. 15., 1917, p. 105 6214 (Mycosphaerella). — Peritheciis in greges minutos dense dispositis plerumque in epiphyllo erumpentibus, punctiformibus, minutis, nigris, globulosis, 75-125 μ diam.; contextu parenchymatico, atrobrunneo; ascis tereti-fusoideis, sessilibus, apice late rotundatis, 45-50 × 5-6, aparaphysatis; sporidiis oblongo-fusoideis, utrinque rotundatis, oblique distichis, aequaliter bilocularibus, 8-12 × 2-3.

Hab. in foliis emortuis vetustis Hellebori viridis (Ranunculaceae), M. S. Salvatore pr. Lugano, Helvetiae. — Maculae nullae.

123. Sphaerella Chrysobalani L. E. Miles, Trans. Ill. Ac. of Sc. X, 1917, 6215

p. 252 (Mycosphaerella). — Maculis amphigenis, forma magnitudine irregularibus, plerumque late confluentibus, in epiphyllo albo-cinereo membranaceis; peritheciis epiphyllis, numerosis nigris, erumpentibus, sparsis 100  $\mu$  diam., ostiolatis; ascis aparaphysatis ovatis v. oblongatis 40-50  $\times$  15; sporidiis inordinatis, hyalinis medio uniseptatis non constrictis, fusoideis, utrinque parum acutatis, rectis v. curvis,  $24\times3,5$ .

Hab. in foliis Chrysobalani Icaco (Rosaceae), Rio Piedras in Porto Rico, Amer. Centr.

124. Sphaerella orataegicola Bondarzew et Tranzschel, Journ. « Bole- 6216 stni Rasteni » VII (1913) p. 49, c. ic. (Mycosphaerella). — Peritheciis epiphyllis in greges magnos sat densos saepe confluentes et majorem partem laminae occupantes congestis, globosis, nigris, immersis, 100-180 μ diam.; ascis elongato-clavatis, saepe medio inflatis, apice incrassatis, basi in pedicellum conspicuum attenuatis, 55-75 × 9-13, aparaphysatis; sporidiis conglomeratis, fere parallelis, elongato-fusiformibus, interdum uno apice attenuatis, rectis vel subcurvulis, uniseptatis, hyalino-viridescentibus, 30-45 × 3-3,5.

Hab. in foliis emortuis Crataegi sanguineae (Rosaceae), in prov. Simbirsk, Rossia (DMITRIEV). — Status pycnidicus sistit Septoria crataegicola B. et T.— Verisimiliter Phyllosticta michailovskoensis Elenk. et Ohl quoque ad hanc speciem pertinet — A Sph. Crataegi Fkl. differt peritheciis constanter epiphyllis, ascis angustioribus.

125. Sphaerella nigerristigma Higgins, Mycol. Centrlbl. IV (1913) p. 6217 192, c. ic. (Mycosphaerella). — Peritheciis amphigenis, gregariis vel sparsis, nigris, immersis, punctiformibus, ovoideis, 90-100 × 45-85, ostiolo papillulato erumpente praeditis; ascis cylindraceis, aparaphysatis, subsessilibus, octosporis, 35-45 × 7; sporidiis fusoideis, interdum subinaequilateris, medio septatis, non constrictis, hyalinis, 16-21 × 2,5-3. — Status pycnidicus sporulis filiformi-flexuosis, continuis vel 1-4-septatis, hyalinis, 35-56 × 2-3. Adest etiam, in antumno, status micropycnidicus phomatoideus.

Hab. in foliis dejectis Pruni pennsylvanicae (Rosaceae), in Georgia, U.S. America.

126. Sphaerella minoensis Sydow, Annales Mycologici XI, 1913, p. 6218

58 (Mycosphaerella). — Peritheciis hypophyllis, non maculicolis, sed in greges minutos v. majores (usque 1 cm. v. ultra longos?) densiuscule collectis, immersis, ostiolo minuto tantum prominulis, globosis, 70-95 μ diam., atris, contextu parenchymatico submembra-

naceo subopaco ex cellulis 5-6  $\mu$  latis composito; ascis cylindraceo-clavatis, fasciculatis, aparaphysatis, apice obtusis, 34-45  $\approx$  8-10, octosporis; sporidiis distichis, elongato-fusoideis, utrinque lenissime attenuatis, medio 1-septatis, non constrictis, hyalinis v. hyalino-flavidulis, 17-25  $\approx$  2,5-3, loculis aequalibus.

Hab. in foliis siccis R u b i sp. (Rosaceae), Kawauye-mura pr. Mino, Japoniae (K. HARA).

127. Sphaerelia maxima L. E. Miles, Trans. III. Ac. of Sc., v. X, 1917, 6219 p. 257 (Mycosphaerella). — Maculis amphigenis, irregularibus, pallide salmoneis, numerosis, 3 cm. ultra latis, anguste marginatis; peritheciis epiphyllis subepidermicis, minutis, crebre sparsis, 80-90 μ cr., ostiolatis, aparaphysatis; ascis oblongis v. supra porum angustatis, 55-60 × 15-17; sporidiis inordinatis, hyalinis anguste oblongis, medio uniseptatis, 28-35 × 3,5-4.

Hab. in foliis vivis plantae cujusdam ignotae (Rubiaceae?), Maricao in Porto Rico, Amer. Centr.

128. Sphaerella Horii K. Hara, Morb. arbor. fruct. jap., 1917, p. 278.—6220 Maculis subrotundis, griseis, atro-brunneo marginatis, dein confluentibus; peritheciis epiphyllis sparsis v. gregariis, globosis v. subglobosis, 60-100 μ diam., epidermide velatis, dein erumpentibus, membranaceis, contextu cellulis 6-8 μ diam., atro-brunneis; ostiolo papillato; ascis clavatis, cylindraceis v. oblongis, e basi lata sessili sursum tenuatis, apice rotundatis, stipitatis, 8-sporis, 30-40 × 7-10; sporidiis biseriatis, ovato oblongis, medio 1-septatis, hyalinis, 9-12,5 × 2,5-3.

Hab. in foliis Citri nobilis (Rutaceae), Prov. Totomi Hamana, Japonia (K. Shimizu).

129. Sphaerella lageniformis Rehm, Ann. Mycol. XI, 1913, p. 155 (My-6221 cosphaerella). — Peritheciis in plaga utraque folii latis, longitudinaliter nervum medialem amplectente et ambiente, plane, exsiccatis, flavide albescentibus, flave rubidulis, curvato-marginatis gregarie innatis, imprimis paginae inferiori, globulosis, nigris, parenchymatice fusce contextis, glabris, poro minutissimo perspicue pertusis, 0,1 mm. diam.; ascis lageniformibus, basi lata sessilibus, versus apicem cylindraceo-elongatis, 50-60  $\mu$  long. subtus 20  $\mu$  ad apicem 10  $\mu$  latis, octosporis; sporis subclavatis, utrinque rotundatis, medio septatis, non constrictis, utraque cellula 1-guttata, hyalinis,  $20 \times 7$ , in inferiore asci parte distichis; paraphysibus nullis.

Hab. ad folia Citri Aurantii culti (Rutaceae), Corona S. California, Amer. bor. (METZ).

30. Sphaerella populnea Sacc., Aan. Myc. XIII, 1915, p. 113. — Maccells subcircularibus 3-4 mm. diam., in epiphyllo sordide albis acromarginatis, in hypophyllo ochraceis immarginatis; perithecis lenticularibus, hypophyllis, parcis, nigricantibus, poro pertusis, 90-100  $\mu$  diam.; ascis aparaphysatis tereti-clavulatis, subsessilibus,  $40 \approx 7-8$ , octosporis; sporidiis distichis anguste fusoideis, utrinque acutis, 1-septatis, non constrictis,  $11-12 \approx 2$ , subrectis.

Hab, in foliis languidis Populi balsamiferae (Salicacea), Tupper Lake N. Y., America bor., socia Septoria populifolia Peck, probabiliter statum pycnidicum sistens (House).— A ceteris speciebus populicolis satis distincta.

131. Sphaerella Salicis Bubàk et Vleugel, in J. Vleugel, Svensk Bot. 6223 Tidskr. 11., 1917, p. 310, fig. 2 (Mycosphaerella). — Maculis dispersis vel laxe gregariis, amphigenis, supra distinctioribus, fusco-nigris, irregularibus, angulatis, 1-2 mm. latis, interdum confluentibus. Peritheciis densissime gregariis, immersis, epidermide tectis, globosis, 90-130 μ in diam., collo brevi, crasso erumpentibus, parietibus crassissimis, contextu nigro-fusco, grosse celluloso, pseudoparenchymatico. Ascis fasciculatis, clavatis, 52-78 × 13-18, tunica crassiuscula, apice late rotundatis, ibidem incrassatis, basi breve stipitatis, hyalinis, aparaphysatis, octosporis. Sporidiis tristichis, clavatis, 18-30 × 5, apice late rotundatis, basim versus attenuatis, hyalinis, guttulatis.

Hab. in foliis emortuis anni praeteriti Salicis nigricantis (Salicaceae), Lulea provinciae Vesterbotten Sueciae (J. VLEU-GEL).

132. Sphaerella Reyesi Sydow, Annales Mycologici XII, 1914, p. 200–6224 (Mycosphaerella). — Maculis definitis nullis, sed toto folio pallescente; peritheciis amphigenis, plus minus dense sparsis et plerumque totum folium occupantibus, immersis, globosis, 100-140 μ diam., atris, contextu atro-olivaceo parenchymatico ex cellulis 7-9 μ diam. composito; ascis fasciculatis, aparaphysatis, clavato-cylindraceis sessilibus, 50-60 × 10-14, octosporis; sporidiis plerumque distichis, ovato-oblongis, circa medium 1-septatis et leniter constrictis, utrinque rotundatis, 10-13 × 5-6, hyalinis, loculo supero maiore.

Hab. in foliis languidis v. subemortuis Sapindi saponariae (Sapindaceae), Los Baños prov. Laguna, ins. Philippin. (S. A. REYES).

133. Sphaerella aurea Stone, Phytopathol. VI (1916) p. 425 fig. 2 (My 6225 cosphaerella). — Peritheciis amphigenis, erumpentibus, gregariis,

sphaeroideis, atris, ostiolo breviter papillato, pertuso; ascis brevissime stipitatis, subclavatis vel cylindraceis, 50-75 × 12-14, sporidiis distichis, hyalinis, fusoideis, curvatis, utrinque acutis, 18-24 × 3-4, ad septum non constrictis. Status pycnidicus Septoria aurea E. et E.

Hab. in foliis emortuis Ribis aurei (Saxifragaceae), Ontario, Amer. bor.

- 134. Sphaerella pachyasca Rostr. Syll. IX p. 613 var. ribicola 6226 Gonz. Fragoso, Bol. R. Soc. Españ. Hist. Nat. t. 18., 1918, p. 368.— Peritheciis gregariis v. sparsis epidermide innatis, ex hyphis radiantibus, ramosis, fuscescentibus, globoso-applanatis, minutis, usque 175 μ diam., atro-brunneis, membranaceis, poro regulariter pertusis; ascis ovoideo-oblongatis, inaequilateralibus, aparaphysatis, plerumque 50 × 15, raro majoribus, 60 × 18, apice incrassatis; sporidiis distichis, subhyalinis, conoideo-ovoideis, 15·17 × 2,5·5,5, loculis biguttulatis. Hab. in ramulis emortuis R i b i s U v a e · c r i s p a e (Saxifragaceae), prope S. Rafael Segovia, Hispania (C. Bolivar). Var. alpinae Ferr. proxima.
- 135. Sphaerella trichophila Karst. Syll. I p. 515. Var. Saxifragae 6227 Dearn., Mycologia, IX, 1917, p. 346. Ascis 45-62 \* 15-16; sporidiis 15-18 \* 5-6.

Hab. in foliis (?) Saxifragae Nelsonianae (Saxifragaceae), Camden Bay N. Alaska, Amer. bor. (Т. Јонансен).

136. Sphaerella exigua Sydow, Annales Mycologici XI, 1913, p. 58 6228 (Mycosphaerella). — Peritheciis subgregariis v. densiuscule sparsis, hypophyllis, subinde etiam epiphyllis, non maculicolis, immersis, dein parte superiore erumpentibus, globulosis, minutissimis, 45-65 μ diam., membranaceis, atris, contextu fusco-brunneo, ostiolo obsoleto; ascis fasciculatis, aparaphysatis, cylindraceo-clavatis, apice obtusis, 22-32 × 5, octosporis; sporidiis oblique monostichis v. saepius distichis, oblongo-fusoideis, medio 1-septatis, non constrictis, hyalinis, 4-5,5 × 1,5-1,75.

Hab. in foliis emortuis Schizophragmae hydrangeoidis (Saxifragaceae), Kawauye-mura, prov. Mino, Japoniae (K. HARA).

137. Sphaerella Paulowniae Shirai et Hara, Bot. Magaz. Tokyo, XXV 6229 (1911) p. 70, tab. 2 fig. 6-8 (Mycosphaerella). — Maculis initio minutis, circularibus, obscure brunneis, demum confluentibus latioribus; peritheciis sparsis, immersis, globosis vel hemisphaericis, ostiolo papillato praeditis, membranaceis, obscure brunneis, 80-120 μ

altis, 70-120  $\mu$  latis; aseis ex ovoideo-cylindraceis, rectis vei carvatis, octosporis,  $40\text{-}60 \times 10\text{-}12$ ; sporidiis plerumque distichis, interdum oblique monostichis, ellipsoideis vel fusiformibus, 1-septatis, ad septum constrictis, biguttulatis, hyalinis,  $10\text{-}13 \times 5\text{-}6$ .

Hab. in foliis Paulowniae tomentosae (Scrophularia-ceae), Prov. Musashi et Mino in Japonia (K. HARA).

138. Sphaerella tardiva Syd., Ann. Mycol. 14., 1916, p. 245; Myc. German. 1337 (Mycosphaerella). — Peritheciis hypophyllis, maculis brunneolis 3-8 mm. diam. plus minus distinctis insidentibus, gregariis, globoso conicis, vertice epidermidem perforantibus, 55-80 μ diam., poro rotundo 10-15 μ lato pertusis, ex cellulis minutis 4-5 μ diam. obscure olivaceo-brunneis subopacis parenchymatice compositis; ascis fasciculatis, clavatis vel subsaccatis, sessilibus, aparaphysatis, 30-40 × 9-11, octosporis; sporidiis plerumque distichis, rarius (in ascis saccatis) tristichis, oblongis obtusis, medio septatis, non constrictis, hyalinis, 10 × 2-2,5.

Hab. in foliis emortuis Scrophulariae nodosae (Scrophulariaceae), pr. Tamsel, Germania (P. Vogel).

139. Sphaerelia montana Naoumoff, Bull. Soc. Oural. Amis Sc. Nat. 6231 XXXV (1915) p. 21 extr., tab. 1 fig. 5 (Mycosphaerella). — Maculis nullis; peritheciis immersis, ostiolo erumpentibus, globosis vel vix depressis, nigris, 130  $\mu$  diam.; ascis fasciculatis, cylindraceo-fusoideis, apice non incrassatis, rectis v. curvulis, 36-41  $\times$  7,3; sporidiis oblique monostichis, subfusoideis, medio septatis, vix constrictis, hyalinis, 9-11,6  $\times$  2,9-3,6.

Hab. in fructibus Veronicae Chamaedrys (Scrophulariaceae), Gub. Perm, Ural, in Rossia.

140. Sphaerella Atropae Syd., Ann. Mycol. 14., 1916, p. 245; Myc. 6232 Germ. n. 1335 (Mycosphaerella). — Peritheciis dense gregariis, in partibus matricis grisee decoloratis insidentibus, globoso conoideis, superiore parte erumpentibus, 90-120 μ diam. poro ca. 12-18 μ lato, contextu parenchymatico ex cellulis 7-9 μ diam. composito; ascis fasciculatis, aparaphysatis, sessilibus, cylindraceis, 38-45 × 7-9, octosporis; sporis oblongis, medio septatis non constrictis, utrinque rotundatis, hyalinis, distichis, 10-11 × 1,5-2,5, loculis vel aequalibus vel saepius uno quam alterum latiore.

Hab. in caulibus emortuis Atropae Belladonnae (Solanaceae), pr. Saarbrücken Germaniae (A. Ludwig).

141. Sphaerella dubia L. E. Miles, Trans. Ill. Ac. of Sc., v. X, 1917, 6233 p. 250 (Mycosphaerella). — Maculis amphigenis, numerosis, rotunda-

tis v. subirregularibus usque 2-3 cm. diam., saepe confluentibus, aridis pallide brunneis, margine colore obscure brunneo indefinito circumdatis; peritheciis epiphyllis erumpentibus, sparsis, minutis, 45-60  $\mu$ , ostiolatis, ostiolo 10-12  $\mu$  diam., aparaphysatis; ascis ovoideis, curvatis, 24-27  $\times$  10; sporidiis inordinatis, hyalinis, uniseptatis non constrictis, rectis, fusoideis, 10  $\times$  3-3,5.

Hab. in foliis vivis S o l a n i sp. (?) (Solanaceae), Maricao in Porto Rico, Amer. Centr. — Ab aliis speciebus in Solanaceis vigentibus pluribus notis diversa.

142. Sphaerella Euryae Theiss., Ann. Mycol. 16., 1918, p. 187 (My-6234 cosphaerella). — Maculis pallide griseis nigro-marginatis, utrinque visibilibus 3-10 μ mm. latis; peritheciis immersis, globosis, 100-120 μ diam., brunneo-parenchymaticis, ostiolo distincto nullo, plerumque in hypophyllo punctiformi aperientibus; ascis cylindraceo elavatis, rosulatis, muco fibrilloso obvolutis, octosporis; sporidiis hyalinis elongato-angustatis, clavulatis, loculo sup. 3,5 μ lato inferiori 2,5-3 μ parum supra medium septatis, 18-21 μ long.

Hab. in foliis Euryae chinensis (Theaceae), Tockyo, Japonia (Shirai). — Socio adest Aulographo Euryae Syd.

143. Sphaerella lkedai K. Hara, Tea Journal (« Chagyôkwai »), 14., 6235 1919, p. 10, cum tab. — Tanaka, Mycologia 12., 1920, p. 331 (Mycosphaerella). — Peritheciis amphigenis v. plerumque hypophyllis, gregariis v. sparsis, immersis, globosis v. globoso-depressis, 50-80 μ diam., apice papillato-ostiolatis et ostiolo 10-12 μ lato, parietibus parenchymaticis donatis e cellulis polygoniis circ. 5-8 μ diam. efformatis, carbonaceis; ascis obovatis v. oblongis apice rotundatis basi pedicellatis v. sessilibus, octosporis, 40-45 × 8-12; sporidiis tristichis v. irregulariter pluriseriatis, oblongo-ovoideis v. cylindraceis, uniseptato-constrictis, loculis inaequalibus, superiore breviore et latiore, primum granulosis, hyalinis, 13,2-16 × 5,5.

Hab. in foliis emortuis Theae sinensis (Theaceae), Shidzuoka-ker Inasa-gun Idaira-mura, Japonia (K. Hara). — A Sph. Theae K. Hara, caracteribus ascorum sporidiorumque diversa.

144. Sphaerella Theae K. Hara, Tea Journal (« Chagyôkawi »), 14., 6236 1919, p. 9, cum tab. — Tanaka, Mycologia 12., 1920 p. 330 (Mycosphaerella). — Maculis orbicularibus v. irregulariter rotundatis, 3-4 mm. diam. demum confluentibus damnosis, primum obscure brunneis demum cinereis; peritheciis epiphyllis immersis late ostiolato-erumpentibus, gregariis, minute punctiformibus nigris, globosis v. depresse globosis, 50-150 μ diam.; parietibus carbonaceo-

membranaceis subparenchymaticis, obscuris, e cellulis polygoniis 3-8  $\mu$  diam. efformatis; ostiolo papillato v. subverruciformi 10-13  $\mu$  lato; ascis caespitosis cylindraceo-clavatis v. oblongo-ovoideis apice rotundatis basi pedicellatis, octosporis,  $30\text{-}42 \times 6\text{-}8$ ; sporidiis distichis oblongo-ovoideis v. cylindraceis utrinque obtusis uniseptatis non constrictis, loculis inaequalibus, superiore parum breviore et latiore inferiore longiore et angustiore, primum guttulatis dein homogeneis, hyalinis,  $10\text{-}13 \times 2\text{-}2.5$ .

Hab. parasiticum in foliis Theae sinensis (Theaceae), Gifu-ken Ena-gun Kawaue-mura, Japonia (K. HARA).

145. Sphaerella Gnidii Maire, Bull. Soc. H. N. de l'Afr. du Nord, 1917, 6237 p. 167. — Peritheciis amphigenis, minutis, 80 110 p diam., globosis, atris, folio toto v. partim arido immersis, laxiuscule gregariis, poro minuto pertusis; ascis subclavatis v. fusoideis, 35 40 × 6 7; sporidiis octonis, distichis, obovato oblongis, medio 1-septatis constrictulis, utrinque obtusis, hyalinis, levibus, panciguttulatis, utrinque obtusis, 10,5-12,5 × 3-5, loculo super. quam inferiore paullo majore.

Hab. in foliis Daphnes Gnidii (Thymelaeaceae), in Mauretania pr. Alger, Afr. bor.

146. Sphaerella Columbiae Syd., Ann. Mycol. 14., 1916, p. 361 (Mycosphaerella). — Maculis praecipue in epiphyllo conspicuis, sparsis, orbicularibus vel suborbicularibus, minutis, 1-5 mm. diam., albis, linea angusta atra marginatis, non confluentibus; peritheciis laxe gregariis, epiphyllis, profunde immersis, applanato-globosis, atris, poro rotundo pertusis, 100-130 μ diam., contextu flavo-brunneo indistincte parenchymatico; ascis aparaphysatis, contextu flavo-brunneo indistincte parenchymatico; ascis aparaphysatis, fasciculatis; cylindraceis, ad basim saepe latioribus, superne incrassatis, 45-55 × 9-10, octosporis, sessilibus; sporis oblongo-clavulatis, plerumque ad apicem rotundatis et basim versus attenuatis, medio vel circa medium 1-septatis, non constrictis, hyalinis, 12-16 × 3,5-4.

Hab. in foliis languidis Columbiae serratifoliae (Tiliaceae), Los Baños, prov. Laguna, ins. Philipp. (С. F. Вакев).

147. Sphaerella Tiliae Naoumow, Bull. f. Angew. Bot. VI, 1913, p. 6239 201, tav. 78 fig. 1-2 (Mycosphaerella). — Maculis paucis, orbicularibus angulosis v. irregularibus, atro-fuscis, medio pallidioribus, 2-4 mm. diam.; peritheciis nigris, punctiformibus poro pertusis, minimis, globosis,  $60 \approx 90$ ; contextu parenchymatico; ascis cylindraceis v. oblongis raro curvatis, brevissime pedicellatis 8 sporis,

 $45-70 \times 15$ ; sporidiis subdistichis, uniseptatis, uno apice leniter tenuatis, medio constrictis, hyalinis,  $15 \times 6$ .

Hab. in foliis vivis Tilia e (Tiliaceae), distr. Tula, Rossia.

148. Sphaerella Acanthopanacis Sydow, Annales Mycologici XI, 1913, 6240 p. 59 (Mycosphaerella). — Peritheciis hypophyllis, non maculicolis, per totam folii superficiem aequaliter densiusculeque sparsis, globulosis, 65-100 μ diam., atris, vertice prominulis, contextu parenchymatice membranaceo, brunneo, ex cellulis 6-10 μ diam. composito; ascis fasciculatis, aparaphysatis, cylindraceo-clavatis, apice obtusis, 30-40 × 6,5-8, octosporis; sporidiis distichis, oblongis, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 13-18 × 2,5.

Hab. in foliis emortuis A can thop an acis ricinifolii (Umbelliferae), Kawauye mura, prov. Mino, Japoniae (K. HARA).

149. Sphaerella Angelicae Woronich., Monit. Jard. Bot. Tiflis XXVIII 6241 (1913) p. 17 (Mycosphaerella).— Maculis griseis, magnis, secus longitudinem caulium extensis; peritheciis globosis, 180-200 μ diam., dense gregariis; ascis cylindraceis, apice rotundatis, brevissime stipitatis, aparaphysatis, 45-60 × 9; sporidiis fusoideis, 1-septatis, hyalinis, 14-16 × 3,5.

Hub. in caulibus siccis Angelicae silvestris (Umbelliferae), Abchasia in Caucaso (Woronow).

150. Sphaerella eryngina Gz. Fragoso, Bol. R. Soc. Españ. Hist. Nat. 6242 t. 18., 1918, p. 366. — Peritheciis numerosis, amphigenis, primum tectis, demum erumpentibus, in maculas griseas insidentibus, inter nervos dense gregariis, nigris, globosis, ostiolo papillato, contextu pseudo-parenchymatico, ostiolo regulariter pertuso; ascis oblongoclavatis, plerumque 60 × 17, parietibus crassiusculis, apice incrassatis, aparaphysatis; sporidiis distichis vel subdistichis, hyalinis, oblongo-ovoideis, utrinque rotundatis, usque 27 × 7, 1-septatis, loculis inaequalibus, infero angustiore, saepe 2-guttulatis.

Hab. in foliis emortuis Eryngii campestris (Umbelliferae), prope Rivas de Jarama, Madrid, Hispania (C. Vicioso). — A Sph. Eryngii (Fr.) Cke et Sph. eryngicola Speg. diversa.

151. Sphaerella Hydrocotyles - asiaticae Patouillard , Bull. Soc. Myc. 6243 de Fr. XXXIV, 1918, p. 90.— Maculis amphigenis, rubris, orbicularibus, 6-8 mm. diam.; peritheciis hypophyllis, numerosis, gregariis, sphaeroideis, nigris, infra immersis, apice papillato-ostiolatis, ostiolo circ. 50  $\mu$  lato; ascis sessilibus oblongo-clavatis, aparaphysatis, 30-40  $\times$  10-12, octosporis, distichis v. inordinatis; sporidiis hyalinis, ellipsoideis, rectis, bilocularibus, non constrictis, 9-12  $\times$  3-4.

Hab. in foliis languidis Hydrocotyles asiaticae (Umbelliferae), in Ins. Madagascar (VIGUIER).

152. Sphaerella Zelkowae Sydow et Hara, in Sydow, Annales My- 6244 cologici XI, 1913, p. 60 (Mycosphaerella). - Peritheciis hypophyllis, non maculicolis, densiuscule sparsis plerumque totam folii superficiem obtegentibus globosis, 65-85 µ diam., immersis, ostiolo minuto erumpentibus atris, contextu membranaceo parenchymaticofusco ex cellulis 6.7 µ diam. composito; ascis fasciculatis, aparaphysatis, clavato-cylindraceis, apice obtusis, 30.45 × 9.11, octosporis; sporidiis subfusiformibus, rectis v. leniter curvulis, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 13-16 \sime 3.

Hab, in foliis emortuis Zelkowae acuminatae (Ulmaceae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

153. Sphaerella radiata N. Ranoïévich, Ann. Univ. Grenoble, livr. 3., 6245 1918, p. 371, fig. 1; Bull. Soc. Myc. de Fr. XXXV, 1919, p. 15, fig. 1. - Peritheciis subepidermicis, in mycelio maculiformi-radioso, fuligineo, insidentibus, dense gregariis, maculis 1-3 mm. diam., confluentibus, caulem cinerascentem, demum nigrescentem obtegentibus, subglobosis, 61-98 \mu diam., ostiolo papilliformi 16-22 \mu diam. praeditis, contextu fuligineo-brunneo; ascis fasciculatis, ovoideoelongatis, inaequilateralibus, rectis, curvulis, sessilibus, raro breve stipitatis, octosporis, 28-48 \* 11-17; sporidiis conglomeratis, oblongis, leniter oblongo-clavulatis, utrinque rotundatis, medio 1-septatis, non constrictis, 11-16 × 3,5-5,5, hyalinis; paraphysibus nullis.

Hab, in caulibus siccis Centranthi angustifolii (Valerianaceae), prope Ubaye ad Jausiers, Basses Alpes, Gallia.

154. Sphaerella Galatea Sacc. — Syll, I p. 520. — var. Centranthi Gonz. 6246 Frag., Mem. R. Soc. Españ, Hist. Nat. t. 11., 1919, 3., p. 86. — A typo differt peritheciis usque 125 \mu cr.; ascis amplioribus usque 36 × 14; sporidiis irregulariter distichis vel subtristichis, loculis saepe guttulatis.

Hab, in caulibus siccis Centranthi angustifolii DC., var. longicalcarati Pan (Valerianaceae), in Montsant, Tarragona, Hispania nord-or. 800 mts. alt (Font Quer).

155. Sphaerella lindaviana Staritz, Verh. Bot. Ver. Brandenb. LV (1913) 6247 p. 74 (Mycosphaerella). - Peritheciis minutis, globulosis, gregariis, atris, ostiolatis, mox epidermidem perforantibus et demum, epidermide elapsa, liberis; ascis cylindraceo-clavatis, 45.53 × 6.7; sporidiis in asci parte superiore irregulariter distichis, saepe curvulis et inaequilateris, fusoideis, utrinque acutiusculis, medio septatis

et leniter constrictis, dimidia parte supera parum latiore, 9-12  $\pm$  4-5. *Hab.* in caulibus V a l e r i a n e l l a e o l i t o r i a e (Valerianaceae), Anhalt, Germania.

156. Sphaerella oculata Syd., Ann. Mycol. XI, 1913, p. 403 (Mycosphae-e24 rella). — Maculis distinctissimis et peculiaribus, sacpe quasi ocularibus, centro minuto 2-5 mm. lato, niveis, zona dilute sed sordide ochracea sacpe interrupta et tunc ex maculis alteris constante cinctis; peritheciis epiphyllis, densiuscule sparsis minutis, 70-90 μ diam., obscure brunneis, contextu fuscidulo minute parenchymatico; ascis fasciculatis, sessilibus, aparaphysatis, apice rotundatis, clavatis, 40-55 × 9-10, octosporis; sporidiis distichis, fusoideis, rectis vel leniter inaequilateris, medio 1-septatis, non constrictis, hyalinis, 16-20 × 3-4.

Hab. in foliis vivis Premnae odoratae (Verbenaceae), Los Baños, ins. Philippinensium (S. A. Reyes).

157. Sphaerella Violae A. Potebnia, Micromyc., Charkow, in Trav. 6249
Soc. Natur. Univ. Imper. Charkow, t. 43., 1909, p. 216, cum icone.
(Mycosphaerella) (descriptio rossica).— Peritheciis subimmersis papilla parva prominulis, 150-170 μ cr.; ascis 60-85 \* 18-20; sporis 21 \* 5-6, cylindraceis, septo infra medio posito.

Hab. in foliis Violae hirtae (Violaceae) jam infestis a Ramularia lactea, Cercospora Violae, nec non Septoria Violae quae status conid. verisimiliter sistit.

158. Sphaerella Zingiheri Shirai et Hara, Bot. Magaz. Tokyo, XXV 6250 (1911) p. 70, tab. 2 fig. 9-12 (Mycosphaerella).— Peritheciis in maculis latis, irregularibus, luteo-brunneis, sparsis, immersis, globosis vel hemisphaericis, subepidermicis, membranaceis, apice papillulatis vel non, obscure brunneis, 60-80, raro usque ad 120 μ diam.; ascis numerosis, clavatis vel ovatis, rectis vel curvatis, octosporis, 50-75 × 10-16; sporidiis 1-vel 2-stichis, fusiformibus vel ellipsoideis, medio septatis, ad septum constrictis, hyalinis, 13-16 × 4-5.— Pycnidiis sparsis, immersis, globosis vel semiglobosis, membranaceis, obscure brunneis, ostiolo papillato praeditis, 50-80 μ diam.; sporulis ellipsoideis, oblongis vel cylindraceis, hyalinis, 5-6 × 2; sporophoris brevissimis vel obsoletis.

Hab. in foliis Zingiberis Miogae (Zingiberaceae), Prov. Shimotsuke, Japonia.

MYCOSPHAERELLA Johans. em. Sacc.— Syll. IX p. 659; Rehmiellopsis Bub. et Kab.; Diplosphaerella Grove, Journ. of Bot. 1912, p. 91.—

Onfr. etiam v. Höhnel in Ann. Myc. XVI, 1918, p. 65.

- Mycosphaerella bohemica (Bub. et Kab.) Sacc., Rehmiellopsis boh. 6251
   Bub. et Kab., Syll. XVII p. 148. Syn. Rehmiellopsis Abietis (Rostr.)
   Rostr., Dansk. Bot. Arkiv, II, 1916, quae anterior (Sphaerella Abietis Rostr.).
- 2. Mycosphaerella conigena (Bub.) Sacc., Rehmiellopsis conigena Bubàk, Ann. Mycol. XII, 1914, p. 206.— Peritheciis in apophysibus gregariis, sclerotioideis, immersis, tectis, globosis, basi applanatulis, apice conice protracto emergentibus, ibidemque postea apertis, 200-250 μ diam., nigris, parietibus crassis, contextu pseudoparenchymatico, extus nigro; intus hyalino; ascis cylindraceis, in aqua non intumescentibus, 90-120 μ long. 11-13 μ latis, rectis v. arcuatis, apice rotundatis, non v. parum incrassatis, basi breve pedicellatis, 16-sporis, aparaphysatis; sporidiis subdistichis, ovoideo-fusoideis, 9-11 × 3,5-4, rectis, hyalinis, uniseptatis, parum constrictis, dimidio superiore majore, apice late rotundato, dimidio inferiore conice attenuato.

Hab. in squamis conorum Pini halepensis et P. Pine a e (Coniferae), Arco, Tirolia, Austria inf. (E. DIETTRICH-KALKHOFF).

3. Mycosphaerella andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6253 Buenos Aires, XXIII p. 52 (1912). — Matrice cortice orbata, tota sordide cinerascente; peritheciis sparsis vel plus minusve gregariis, superficialibus, subglobosis, minimis, 75-80 μ diam., coriacellis, glabris, atris, non vel vix umbonato-ostiolatis, contextu indistincto; ascis ellipsoideis, utrinque attenuatis, brevissime pedicellatis, 40 × 15, aparaphysatis, 24-sporis; sporidiis conglobatis, ellipsoideis, utrinque subacutiuscule rotundatis, 6-7 × 3, medio septatis, non constrictis, hyalinis, senescendo fumosis.

Hab. in ramulis aridis dejectis Lycii longiflori (Solana-ceae), in praeruptis andinis, Potrerillos prope Mendoza, Argentina.

PHARCIDIA Körb. — Syll. I p. 571, IX p. 676, X1 p. 303, XIV p. 537, XVI p. 484, XVII p. 646.

1. Pharcidia Pelvetiae Sutherland, New Phytologist XIV (1915), nn. 6254 2-3, p. 39 fig. III, 1-3. — Mycelio crasso, brunneo, saepe superficialiter submembranaceo; peritheciis minutis, 45-55, sphaeroideis ostiolo prominentibus, primum immersis demum superficialibus, contextu brunneo coriaceo praeditis; aseis minutis, cylindraceis, apice breviter rotundato-incrassatis, 30-35 \* 10-14, octosporis; paraphy-

sibus nullis; sporis hyalinis, primum bi-demum quadrilocularibus, rotundatis, muco indutis, finaliter disrumpentibus,  $12-15 \times 3-4.5$ .

Hab. parasitica in Pelvetia (Alge) ad litora Brittaniae.

2. Pharcidia calcariae (Flagey) Vouaux, Bull. Soc. Mycol. Fr., 1912, p. 6251 252, Arthopyrenia calc. Flagey, Sich. Alg. p. 113. — Peritheciis arcte congregatis et plagulas nigras 1-4 mm. vel usque ad 10 mm. diam. efformantibus, immersis apice 1/4-1/3 prominentibus, nigris, sphaeroideis, ostiolo parum depresso, 185-350 μ diam.; contextu crasso, obscure brunneo pseudoparenchymatico e cellulis polygoniis aegre visibilibus 5-9 μ diam. efformato; ascis stricte clavatis, basi quandoque parum inflatis, pedicello distincto sed brevi praeditis, apice late rotundatis, tunica apice fortiter incrassata, octosporis, 70-90 × 14-18; paraphysibus non visis; sporidiis distichis, oblongis, hyalinis, uniseptatis, loculo inferiore apice parum angustiori, 2-4 guttulatis, 18;23 × 5-7.

Hab. in thallo Aspiciliae calcareae (Lichenes), Azeba Costantina, Algeria (FLAGEY). – f. minor Vouaux, l. c. p. 253. — A typo differt peritheciis minus numerosis (2-6), minoribus, 110-150  $\mu$  diam.; ascis  $74.92 \times 12.14$ ; sporidiis quandoque inaequilateris, curvulis, multiguttulatis,  $20.22 \times 12.14$ . — Hab: in thallo Aspiciliae calcareae Nant Ardeche, Gallia (Fr. Marc). – f. macrospora Vouaux, l. c. p. 253. — A typo differt sporidiis  $20.32 \times 6.8$ , quandoque curvulis et ad septum constrictulis. – Hab. in thallo Aspiciliae calc., Azeba Costantina, Algeria (FLAGEY).

3. Pharcidia Lichenum Arn. — Sacc., Syll. IX p. 677 — var. verruculosa 6256 Rehm, Ann. Mycol. XI, 1913, p. 150. — Peritheciis gregariis, superficialibus, globulosis, poro minutissimo perspicuo pertusis, membranacee fusce contextis, verruculosis, 0,07-0,1 mm. subfuscis; ascis primitus ventricosis, sessilibus, dein clavatis, 45-50 × 12, octosporis; sporis subclavatis, cellula superiore latiore, utrinque attenuatis, medio subconstrictis, utraque cellula biguttata, hyalinis, ca. 12 × 3,5, 1-2-stichis, paraphysibus nullis.

Hab. in thallo Bilimbia e alicujus terrincolae (Lichenes), in silva prope Sugenheim, Franconiae mediae (REHM).

4. Pharcidia minima (Stein) Vouaux, Bull. Soc. Mycol. Fr. 1912, p. 6257 244, Cercidospora minima Stein Novak, Flecht. d. Umgeb. v. Deutsch, p. 56. — Peritheciis minutissimis, lente tantum visibilibus, nigris, nitidis, ostiolo tenuissimo, contextu brunneo-nigro, ascis plerumque elavatis, octosporis; paraphysibus mox evanidis; sporis elongato-

ellipsoideis, loculo inferiori quandoque minori, uniseptatis, 20-25 × 8-10.

Hah. in thallo Gyalectae Steini (Lichenes), Novak, Bohemia (Novak). — Ph. allongenae et Ph. innatulae proxima.

5. Pharcidia Peltideae Wainio, Lich. Cauc. et Pen. Taur. p. 342; Vo-6258 uaux, Bull. Soc. Mycol. Fr. 1912, p. 255. — Peritheciis numerosis, subimmersis, brunneis, apice crassioribus et brunneo-fuligineis, integris, globulosis, circ. 65 μ diam.; ascis ovoideo-ventricosis v. variabilibus, circ. 40 × 13, octosporis; paraphysibus nullis; sporidis ovoideo-oblongis v. oblongis, rectis, hyalinis, uniseptato-constrictulis, quandoque loculo uno altero angustiore, 10-12 × 3,5.

Hab. in thallo Peltigerae aphtosae (Lichenes), Asan Rossia. — A Ph. Lichenum differt peritheciis numerosis, sporidiis minoribus.

6. Pharcidia Leptaleae Steiner in Fritsch, Beitr. z. Fl. v. Constant. 6259 I Krypt. p. 238 f. 13; Vouaux, in Bull. Soc. Mycol. de Fr., 1912, p. 238. — Peritheciis numerosis, immersis, apice tantum ostiolo simplici emergentibus, sphaeroideis, 150 μ diam., contextu supra rubro-brunneo, infra hyalino v. pallide lateritio, ex cellulis verticaliter elongatis efformato; ascis cylindricis membrana tenui praeditis, 60-70 × 9-11, octosporis; paraphysibus nullis; sporidiis oblique monostichis, uniseptatis, ad septum constrictulis v. non, 9-11 × 6,5-7,5.

Hab. in apotheciis Physciae leptaleae (Lichenes), in silva Belgrad, Serbia (K. FRITSCH).

7. Pharcidia epistigmella Nyl. in Herb. H. E. Hasse, n. 915 et in Vouaux, Bull. Soc. Mycol. de Fr. 1912, p. 235. — Peritheciis immersis apice tantum prominulis, solitariis v. binis raro 3-6 gregariis, subsphaeroideis, nigris, ostiolo simplici donatis, 90 190 μ diam.; contextu supra obscure brunneo basi pallidiori v. subhyalino. pseudoparenchymatico, e cellulis verticaliter elongatis 5-8 × 3-4; ascis fusoideis, apice rotundatis, pedicello brevi crassoque sed distincto et truncato praeditis, tunica plerumqne ad apicem crassa, octosporis, 42-50 × 12-15; paraphysibus nullis; sporidiis distichis, hyalinis, uniseptatis, ad septum constrictulis v. non, oblongis utrinque rotundatis loculo inferiori parum angustiori praeditis, 11-14 × 3,5-4,5.

Hab. in thallo et apotheciis Placodii festivi (Lichenes), Santa Monica Monts, California. — Ph. Lichenum valde proxima — var. meizospora Vouaux, l. c., p. 236.— A typo differt sporidiis majoribus, 14-19 \* 4,5-6, plerumque bi-triguttulatis, ascis par

rum brevioribus, 39-45 μ. — Hab. in apotheciis Placodii sp., Batan Puello, Mexico (Fr. NICOLAS).

8. Pharoidia Ramalinae (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de Fr. 6261 1912, p. 254, Arthopyrenia Ramalinae Müll. Arg., Flora 1883, p. 319.— Peritheciis numerosis, fere omnino immersis, hemisphaerico-pyramidatis, nigris, 100 μ latis; aseis cylindrico obovoideis, vix triplo latitudinem superantibus, octosporis; paraphysibus raris et parum distinctis; sporidiis utrinque rotundatis, rectis v. leniter curvulis, hyalinis, uniseptatis, 12-15 \* 4-5.

Hab. in thallo et subtus apotheciis Ramalinae complanatae var. hypodectodis (Lichenes), prope Apiahy, Brasilia (Puiggari).

9. Pharcidia epiramalina Vouaux, Bull. Soc. Bot. de Fr. LVIII (1911), 6262 Mém. 22 p. 71.— Vouaux, Bull. Soc. Mycol. de Fr. 1912, p. 253.— Peritheciis sat copiosis, plerumque sparsis, interdum 2-3-aggregatis, sphaerico-depressis, quarta parte superiore prominentibus, ostiolo simplici, nigris, 60-110 μ latis, contextu hyphis intermixtis constante nec pseudoparenchymatico, spisso; ascis paucis, 15-20 in quoque perithecio, obpiriformibus, basi late rotundata sessilique, a priore tertia parte attenuatis sed apice rotundatis, pariete praesertim summa parte spissa, octosporis, inordinatis, aparaphysatis, 27-32 × 13-16; sporidiis elongatis, utrinque rotundatis, hyalinis, 1-septatis, non vel perpaullum constrictis, interdum cellula inferiore tenuiore, 8-12 × 2,5-3,5.

 $\it Hab.$  in thallo R a malinae decipientis et R. Bourgae a e a nae (Lichenes), Vueltas de Taganana, Teneriffa, alt.800 m.— Circa perithecia effunditur mycelium vel superficiale fuseum, qua grisescit interdum lichenis superficies, gemmas sphaericas fuseas 3,5.4  $\mu$  latas producens, solitarias sive 2-8 seriatim coalitas, vel inclusum atque hyalinum, 2-3  $\mu$  crassum. Ph. Ramalinae et Ph. Peltideae proxima sed satis diversa.

10. Pharcidia Squamariae Bouly de Lesd., Bull. Soc. Bot. de Fr. LVI 6263 (1909) p. 477. — Peritheciis copiosis, nigris, minutissimis, hemisphaericis, politis, primum thallo totis immersis dein sessilibus, liberis; ascis copiosis, clavatis, paraphysibus paucis simplicibus obvallatis; sporidiis octonis, hyalinis, 1-septatis, 13-17 × 6-6,5, loculis aequalibus vel subaequalibus.

Hab. parasitica in hymenio Squamariae saxicolae (Lichenes), Puebla, Tepoxuchil, Mexico, alt. 2270 m. (A. BRONARD).

11. Pharcidia maritima Bouly de Lesdain, Rech. Lich. env. Dunkerq, 626

p. 274; Vouaux, Bull. Soc. Mycol. Fr. 1912, p. 250.—Peritheciis sparsis, copiosis, primum immersis dein apice  $^1/_4$ - $^1/_3$  prominentibus subsphaeroideis, nigris, ostiolo simplici 115-130  $\mu$  diam.; contextu extus obscure brunneo, parte immersa pallidiore, crasso, pseudoparenchymatico e cellulis polygoniis, 6-7  $\mu$  cr. efformato; ascis obovoideo-elongatis, versus basim latioribus; apice late rotundatis basi in pedicellum brevem abrupte attenuatis, tunica crassa praeditis, octosporis,  $42\text{-}54 \approx 13\text{-}18$ ; paraphysibus nullis; sporidiis ellipsoideo-elongatis, distichis, utrinque late rotundatis, hyalinis, medio uniseptato-constrictulis, loculo inferiori angustiori, 2-6 guttulatis,  $21\text{-}22 \approx 6\text{-}9$ .

Hab. in thallo Verrucariae muralis (Lichenes), prope Malo-Terminus, Gallia bor (BOULY DE LESDAIN).— Ph. superpositae proxima a qua differt peritheciis minoribus, sporidiis majoribus etc.

12. Pharcidia haesitans Vouaux, Bull. Soc. Mycol. de Fr. 1912, p. 249, Verrucariae sp. Nyl. in Kihlm., Neue Beitr. Flechlt. Halb. Kola p. 59.— Peritheciis subprominentibus, nigris, 100-200 μ latis; ascis octosporis; paraphysibus nullis; sporidiis oblongo-ellipsoideis, simplicibus v. uniseptatis, 14-17 × 6-7.

Hab. in thallo Verrucariae sphinctrinoidis (Lichenes), peninsula Kola (KIHLMAN).— A Ph. superposita et Ph. verrucariarum peritheciis sporidiisque minoribus diversa.

**EPICYMATIA** Fuck. — Syll. I p. 570, XI p. 303, XVI p. 485, XXII p. 147.

1. Epicymatia aphthosae Moreau, Bull. Soc. Myc. Fr. XXXIII (1917) 6266 p. 27, cum ic.— Peritheciis 3-4 aggregatis, thallicolis, infra cephalodias, superficialibus, hemisphaerioideis vel subglobosis, fusco-brunneis, ostiolo minutissimo pertusis; ascis oblongis, 40-50 \* 4-6, octosporis, paraphysibus filiformibus simplicibus septatis obvallatis; sporidiis uniseptatis, ad septum leniter constrictis, 15-17 \* 4-6, subhyalinis, loculis paene aequalibus biguttulatis.

Hab. in thallo Peltideae aphthosae (Lichenes), Ravin de Vendeix, La Bourboule, Puy-de-Dôme, Gallia.

VENTURIA De Not. — Syll. I p. 586, IX p. 687, XI p. 305, XIV p. 541, XVI p. 489, XVII p. 650, XXII p. 150.

- I. Euventuria; sporidia hyalina, achroa
- Venturia andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos 6267
   Syll. fung. XXIV (XII-1926)

Aires XXIII p. 50 (1912). — Maculis nullis sed matrice tota arescendo albo cinerea; peritheciis sparsis, superficialibus, pusillis, atris, udis, globosis, 120-150  $\mu$  diam., siecis cupulato-collapsis, astomis, setis laxis, patentiusculis, apice acutis, 50-80  $\times$  4-5, opace nigris adspersis; contextu dense minuteque parenchymatico, primo pellucido dein opaco; ascis e clavulato subfusoideis, brevissime pedicellatis, aparaphysatis, 50-60  $\times$  10; sporidiis distichis, ellipticofusoideis, utrinque acutiusculis, medio septatis, non constrictis, hyalinis, 17-20  $\times$  5-6, loculis aequilongis minute biguttulatis.

Hab. in culmis et vaginis aridis et subputrescentibus Elymibarbati (Graminaceae), in andinis Cerro del Plata, prope Mendoza: Argentina.

2. Venturia Litseae Syd., Ann. Mycol. XI, 1913, p. 404. — Maculis 6268 vagis, apicalibus veļ marginalibus, omnino irregularibus et saepe confluentibus, 1-10 cm. longis, sordide ochraceis vel ochraceo-griseis linea atro-purpurea marginatis; peritheciis epiphyllis, globulosis, vertice prominulis, 100-130 μ diam., atris, vertice setis paucis vel copiosioribus erectis rigidis rectis vel parum et irregulariter curvatis continuis obscure brunneis subopacis 30-70 μ longis, 3,5-5 μ crassis deciduis obsitis, contextu parenchymatico inferne fusco ex cellulis ca. S-10 μ diam., superne dilute brunneo ex cellulis minoribus 6-8 diam. composito, poro ca. 15-20 μ lato praeditis; ascis clavatis, sessilibus, 40-50 × 9-12, octosporis; paraphysibus fugacibus; sporidiis distichis, oblongis, plerumque leniter curvatis, utrinque obtuse rotundatis, intus dense minuteque guttulatis, hyalinis, 1-septatis (?), 15-19 × 4-5.

Hab. in foliis vivis Litseae glutinosae (Lauraceae), Los Baños ins. Philippinensium (S. A. REYES).

3. Venturia borgiana Sacc., Nuovo Giorn. Bot. it. N. S. v. XXII, 1915, 6269 p. 36. — Areis longissimis, arescendo dealbatis in folio adhue vivente; peritheciis gregariis, amphigenis, subsuperficialibus, globulosis, aterrimis, 20  $\mu$  diam.; setis divergentibus cuspidatis, 60-70  $\approx$  6, continuis, atrofuligineis, basi bulbillosis, 11-12  $\mu$  cr.; ostiolo minuto rotundo 7-8  $\mu$  diam.; contextu anguste sinuoso parenchymatico fuligineo; ascis tereti-fusoideis breviter obtuseque stipitatis, apice rotundatis, 35-40  $\approx$  6-7, aparaphysatis; sporidiis irregulariter 1-2-stichis, oblongis, utrinque rotundatis, obscure 1-septatis, non v. vix constrictis, hyalinis.

Hab. in foliis Pandani utilis (Pandanaceae), S. Antonio, in Insula Melita (G. Borg).

4. Venturia chartae Vouaux, Bull. Soc. Bot. Fr. LIX (1912) p. 15.— 6270 Peritheciis superficialibus, sparsis, nigris, ostiolo simplici tenuissimo, sphaericis, 90-120 μ diam., undique setis sparsis, rigidis, rectis, simplicibus, a basi applanata paullo attenuatis, fuscis, 30-60 × 3,5, supra basim crassis vestitis, contextu fusco, tenui, pseudoparenchymatico; ascis basi pluribus connatis, subclaviformibus, sessilibus, octosporis, aparaphysatis, 26-36 × 4-5; sporidiis distichis, ellipsoideis, utrinque rotundatis, hyalinis, 1-septatis, leviterque constrictis, biguttulatis in utroque loculo, 5-6 × 1,5-2.

Hab. in charta putri, Versailles, Gallia.

## II. Chromoventuria: sporidia colorata

5. Venturia emergens Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 6271 P. III, 1917, p. 224. — Peritheciis sparsis, vel congregatis et basi confluentibus, in rimis corticis, 0,2 mm. diam., ampullaceis, setis patulis supra ornatis; ascis clavatis, breviter pedicellatis, octosporis; paraphysibus linearibus, ascos superantibus; sporidiis oblique monostichis, viridi-olivaceis, anguste ovoideis vel subfusoideis, obtusis, inequaliter uniseptatis, leniter constrictis, 8-10 \* 4.

Hab. in ramis emortuis Heveae brasiliensis (Enphorbiaceae), Lassahena, Ceylon, Asia.

6. Venturia Cerasi Aderhold, Landw. Jahrb. 1900 p. 541. — Venturia 6272 chlorospora fm. Pruni-Cerasi Sacc., Michelia I p. 382 (1878). — Peritheciis hypophyllis, hinc inde gregariis, immerso-prominulis, globulosis, atris, 150  $\mu$  diam., ostiolo latiusculo pertusis, setulis paucis ornatis v. omnino calvis; ascis cylindraceis medio inflatulis, subsessilibus,  $60.70 \times 10.12$ , paraphysibus paucis obvallatis; sporidiis distichis, in parte asci superiore monostichis, ellipsoideis, parum supra medium septatis ad septum constrictulis, chlorinis,  $12.15 \times 6$ , loculo infero angustiore.

Hab. in foliis languidis v. emortuis Pruni domestica e et Persica e (Rosaceae), in Germania, Italia, Gallia, Amer. bor.—Valde similis Venturiae pirinae sed stat. conidiophorus est Fusicladium Cerasi (Rob.) Sacc.

7. Venturia subcutanea Dearn., Mycologia, 9., 1917, p. 348. — Peritheciis membranaceis, nigricantibus, gregariis, epidermide velatis erumpentibus, hypophyllis subiculo ex hyphis septatis, brunneis, 4-20 μ cr. ramosis conflato insertis, maculas orbiculares 1-4 mm. diam. trans lucem perceptibiles formantibus, nonnullis vertice setulis rigidis, brunneis, parcis (circ. 10) ornatis, nonnullis calvis,

plano-globosis v. conoideis, 90-150  $\mu$  diam., ascis 8-sporis, apara-physatis, interdum deorsum latioribus, 54-66  $\times$  10-15, tunica 2  $\mu$  cr.; sporidiis 1-septatis, fuligineis, saepe deorsum 2-seriatis, 15-17  $\times$  4,5-6.

Hab. in foliis emortuis Salicis reticulatae (Salicaceae), N. Alaska, Amer. bor. (F. Johansen).— Fere ambigit intergenera Sphaerella, Asterina et Venturia.

8. Venturia longisetosa Volkart ap. Rübel in Engl., Bot. Jahrb. 47. 6274 (1912) p. 513, c. ic. — Peritheciis hypophyllis, gregatim mycelio nigro insidentibus, 45 88 μ latis, ostiolo pilis perlongis (usque ad 200 μ longis, 4 μ cr.) saepe riflexis minutis; ascis piriformibus, 23-48 × 9-12; sporidiis octonis, distichis, bilocularibus, olivaceis vel fuscis, 9-14 × 4-5, loculo superiore paullo longiore et crassiore; paraphysibus nullis.

Hab. in foliis putrescentibus Salicum sp. (Salicaceae), in Alpibus Rhaetiae Primae (Bernina).

9. Venturia Braunii Volkart ap. Rübel in Engl., Bot. Jahrb. 47. (1912) 6275 p. 515, c. ic. — Peritheciis gregatim subiculo nigro insidentibus, globulosis, 64-140 (plerumque 90)  $\mu$  diam., nigris, grosse-cellulosis, ostiolo circulari setis atris 3-9, 32-48  $\mu$  longis cincto; ascis piriformibus, apice rotundatis, 37-48  $\times$  12-16; sporidiis octonis, distichis, 14-16  $\times$  5-6, ad septum vix constrictis, dilutissime luteis, loculo superiore aliquanto longiore et crassiore; paraphysibus nullis.

Hab. in bracteis, rarius in foliis, Bupleuri stellati (Umbelliferae), Monte Bernina, Engad. sup. (J. BRAUN).

10. Venturia maculicola Schemhel, Bull. f. Angew. Bot. 6., 1913, p. 698, 6276 tab. 98 fig. 1,5. — Maculis amphigenis, irregularibus, cinereis vel obscure brunneis, distincte limitatis, 10-14 mm. diam.; peritheciis copiosis, gregariis, praecipue epiphyllis, atris, immersis, dein ex epidermide erumpentibus, fere lageniformibus, apice poro pertusis, 70-80 × 56 70, setis concoloribus, 30-52 × 11-12; ascis cylindraceis 22-25 × 5,6-7; sporidiis octonis, uniseptatis, ad septa constrictis, 8 × 2,8, dilute viridibus.

Hab. in foliis vivis Vaccinii Vitis idaeae, in prov. Minsk, Rossia.

## COLEROA Fr. - Syll. XXII p. 153.

Coleroa Rubi-Idai (v. Höhn.) Sacc., Niesslia? Rubi Idaei v. Höhn., 6277
 Fragm. z. Mykol. 842, in Stzgsb. Wiss. Wien CXXIII, 1, p. 98
 (1914).— Peritheciis inter pycnidia sparsis, globoso-ovoideis, 200 μ

circ. latis, superficialibus, ostiolo applanato, minuto, excipulo brunneo, tenui, pseudoparenchymatico, in parte superiore et praecipue circa ostiolum setuloso, setis 20-40, brunneis, pellucidis, rigidis, obtusis, 50-200 a longis, parce septatis; ascis copiosis, cylindraceoclayatis, octosporis, 50-52 × 7-8, paraphysibus filiformibus copiose obvallatis; sporidiis distichis, fusoideis, hyalinis, bilocularibus, 8- $10 \approx 2-3$  (immaturis).

Hab. in pagina inf. foliorum Rabi idaei, socia Pyrenochaela Rubi-idaei Cavr. cujus status ascophorus sistit, in agro Papieusi, Ital. bor.

- DIDYMELLA Sace. Syll, I p. 545, IX p. 661, XI p. 301, XIV p. 535, XVI p. 479, XVII p. 154, XXII p. 154.
- 1. Didymella orchnodes Rehm, Ascom. Philippin. VIII, in Leaflt. of 6278 Philippin. Bot. VIII, 1916, p. 2943. - Perithecia in maculis epiphyllis orbicularibus, obscure fuscis senilibus medio albescentibus tenuiterque fusco marginatis, 0,5-1 cm. latis gregarie innata, globuloso-hemisphaerica protuberantia, minutissime papillulata, demum denudata, atra, 0,5-0,8 mm. lata, excipulo crasso subcarbonaceo. Asci cylindrico-fusiformes, 50.60 × 5.7, 8-spori. Sporae fusoideae, rectae, hyalinae, medio septatae, non constrictae, utraque cellula guttata, 10-12 × 3-4, 1-2-stichae. Paraphyses filiformes 1,5 µ.

Hab. ad folia? Goniothalami (Anonaceae), Los Baños, Ins. Philipp. (C. F. BAKER). - Peritheciis magnis insignis.

2. Didymella acanthophila Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6279 Buenos Aires, XXIII, p. 53 (1912). - Peritheciis matrice sordide cinerascente innatis, sparsis vel laxe gregariis, subseriatis, erumpentibus, minutis, globosis, 150-200 µ diam., carbonaceis, glabris. impresso-ostiolatis, contextu opaco indistincto; ascis subcylindraceis, apice rotundato-truncatulis, basi brevinscule attenuato-pedicellatis, 110-120 × 15, paraphysibus filiformibus parum longioribus commixtis; sporidiis saepius oblique monostichis, ellipsoideo-biconicis, utrinoue rotundatis, ad septum leniter constrictis, hyalinis, 16-18 > 8-9, loculis aequilongis pergrosse 1-guttulatis.

Hab. in spinis aridis Opuntiae aurantiacae (Cactaceae), in saxosis Potrerillos, prope Mendoza: Argentina,

3. Didymella nigrescens Dearn. et Fairm. in Ch. E. Fairman, Myco 6280 logia 10., 1918, p. 242. - Peritheciis nigris apice nitentibus in superficie obscurata ramuli decorticati subgregariis, conoideis v. depresse globosis basi vix conspicua in ligno immutato immersis,

ostiolo tantum v. parte superiore tantum prominentibus 0,25-4 mm. diam., ostiolo minuto rotundato umbilicato; ascis clavato-cylindraceis apice obtusis, breviter stipitatis 8-sporis,  $65\cdot90 \times 7\cdot10$ ; paraphysibus simplicibus copiosis ascos superantibus; sporidiis hyalinis inaequilateris oblongo-fusoideis supra distichis, 1-septato-constrictis, cellula superiori longiori, quandoque guttulatis,  $10\cdot13 \times 3.5\cdot4.5$ .

Hab. in ramis vetustis Symphoricarpi oreophili (Caprifoliaceae), Ute Park, Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

4. Didymella Eurotiae Ch. E. Fairman, Mycologia 10., 1918, p. 243. — 6281 Peritheciis sparsis v. gregariis primum epidermide tectis dein erumpentibus demum adnato-superficialibus, globosis, ostiolo minuto papilliformi praeditis, 0,3-3,5 mm. diam., pallide nigris; ascis elavato-cylindraceis apice rotundatis, longe stipitatis S-sporis, 133 × 10; sporidiis oblongo-fusoideis, 1-septatis, septo leniter constrictis, oblique uniseriatis, quoque loculo guttula magna praedito, hyalinis, 20-23 × 6-7.

Hab. in ramulis vetustis Eurotiae lanatae (Chenopodiaceae), Ute Park Colfax C. 2200.2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

5. Didymella Sisymbrii (Rehm) v. Höhn., Annales Mycologici 16., 6282 1918, p. 223. — Didymella superflua (Awl.) Sacc. — var. Sisymbrii Rehm, Ascom. exs. 2170. — Peritheciis 120-160 × 110 cr., ostiolo depresso non distincte limitato 30  $\mu$  lato praeditis; membrana peritheciorum nitide pallide flavo-brunnea (nec nigro-brunnea ut in Didymella superflua), e 3-4 seriebus cellularum 8-12  $\mu$  cr., infra 8  $\mu$  lateraliter 12  $\mu$  cr., efformata; paraphysibus longe filiformibus et mucosis; ascis sessilibus clavatis, 45-54 × 12 cr.; sporidiis distichis, hyalinis, bilocularibus, 12-14 × 4,5-6, loculis subaequalibus praeditis.

Hab. in Sisymbrio strictissimo (Cruciferae), Wehlen, Helvetia (Krieger).

6. Didymella Drymeia v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, 6283 p. 248 (nomen nudum).

Hab. in amentis masculis Caricis drymeiae (Cyperaceae), socia *Phyllosticta Drymeiae* (enfr. Fragmente z. Mykol, 1034, in Sitzb. k. Ak. d. Wiss. Wien 1917).

7. Didymella oligospora Sacc., Notae Myc. XXIV p. 6 (Bull. Ort. bot. 6284 Nap. 1918).— Peritheciis dense gregariis, subcutaneis, globoso-len-

ticularibus,  $140-160~\mu$  diam., membranaceis, nigris, intus albis, ostiolo breviter papillato-erumpenti; contextu minute celluloso, fuligineo; ascis clavatis, apice rotandatis, deorsum breviter tenuato-stipitatis,  $80-90 \times 11-13$ , copiose filiformi-paraphysatis; sporidiis plerumque quaternis, oblique 1-stichis, oblongo-clavulatis, saepe inaequilateris, apice rotundatis, deorsum tenuatis, constricto-1 septatis,  $21-23 \times 8-9$ , hyalinis initio strato angusto hyalino cinetis.

Hab. in ramis emortuis Heveae brasiliensis (Euphorbiaceae), cultae, Singapore (BAKER).

8. Didymelia quercina Petrak, Ann. Mycol. XII, 1914, p. 473. — Petritheciis hypophyllis, sparsis v. subgregariis maculasque subrotundatas canescentes formantibus, epidermide tectis subglobosis, ostiolo brevissime conico pertusis, fusco nigris, 150-200 μ diam.; ascis longe cylindraceis apice rotundatis, basi subito attenuatis, brevistipitatis, 60-78 × 9-12, octosporis, paraphysibus tenuibus filiformibus obvallatis; sporidiis monostichis, interdum subdistichis, hyalinis, ovatoellipsoideis utrinque rotundatis, medio uniseptatis, ad septum parcissime constrictis, loculis fere aequalibus, eguttulatis, 12-16 × 5-8.

Hab. in foliis emortuis Quercus Roboris (Fagaceae), monte Svrcove prope Mähr. Weisskirchen Moraviae or. — A D. clavulata Ell. species etiam quercina in America bor., magnitudine ascorum sporidiorumque mox dignoscitur.

9. Didymella Vlachii Bubàk, III. Beitr. Pilz. Montenegro in Botanikai 6286 Közlemények, 1915, p. (58).— Peritheciis dispersis, immersis, utrinque epidermide tectis, postea infra apice parum erumpentibus, globosis, usque 300  $\mu$  in diam., nigris, parietibus crassis, contextu pseudoparenchymatico, extus castaneo-brunneo, apice obscuriore, intus dilute brunneo; ascis cylindraceis, 80-100  $\approx$  8-10, apice parum attenuatis, basi breve pedicellatis, octosporis, paraphysibus crebris, filiformibus, 2,5  $\mu$  latis obvallatis; sporidiis oblique monostichis, ellipsoideis, 13-17  $\approx$  6-8, medio uniseptatis, non constrictis, hyalinis, coacervatis roseolis.

Hab. in foliis emortuis Quercus sessiliflorae (Fagaceae), Podgorica, Montenegro.

10. Didymella eutypoides Rehm, Ascom. Philippin. VIII, in Leafit. of 6287 Philipp. Bot. VIII, 1916, p. 2943.—Perithecia gregarie innata, conoidea peridermium extus cinereum elevantia, papillulata brevi atra perforantia, 0,3 mm. lata parenchymatice crasse contexta; ascis clavatis, -80 × 10-12, 8-sporis; sporis fusoideis, rectis, medio septatis, non constrictis hyalinis, 20-22 × 5, distichis; paraphyses filiformes.

Hab. ad Bambusam emortuam (Graminaceae), Los Baños, Ins. Philipp. (S. A. Reyes). — Didymella maculosa Penz. et Sacc. ascis sporisque multo majoribus diversa. Habitus Eutypellae, colore cinereo peridermii.

11. Didymella senegalensis Speg., Anal. Mus. Nac. Buenos Aires, XXVI 6288 p. 123 (1914) c. ic.— Maculis plane nullis; peritheciis sparsis vel laxissime seriatis, in foliis amphigenis, epidermide velatis, vix prominulis, globoso-depressis, 120-150  $\mu$  diam., atris, glabris, submembranaceis, contextu indistincto olivaceo, ostiolo minuto impresso perforatis; ascis subfusoideis, sessilibus,  $60 \approx 10$ , pseudoparaphysibus mucosis parcis commixtis; sporidiis distichis, e cylindraceo clavulatis, rectis vel leniter inaequilateris, medio septatis, vix constrictis,  $14-15 \approx 4$ , loculis aequilongis, supero obtusiore crassiore, infero angustiore acutioreque, guttulis duabus parvis ornatis.

Hab. in culmis et foliis Cynodontis dactyli (Graminaceae), ad viarum latera, prope Daccar, Senegal.

12. Didymella Penniseti Syd. ap. Fuhrmann et Mayor, Voy. Expl. 6289 scient. Columbie, in Mém. Soc. neuchât. Sc. Nat. V p. 435 (1913). — Peritheciis epiphyllis, in greges minutos ellipticos vel parum elongatos, usque ad 0,5 mm. longos digestis, epidermide diu tectis, tandem vertice erumpentibus, globulosis, 70-100 μ diam., atris; ascis clavatis, apice obtusis, crasse tunicatis, crassiuscule breviterque noduloso-stipitatis, 40-60 × 10-13, octosporis, parce paraphysatis; sporidiis distichis, fusoideis, medio vel circa medium 1-septatis, non constrictis, hyalinis, 18-22 × 3,5-5.

Hab. in foliis vivis vel languidis Penniseti tristach yi (Graminaceae), in regione andina prope Angelopolis, Columbia, alt. 1800 m.

13. Didymella seriata Rehm, Ascom. Philippin. VIII, in Leafit. of Philippin. Bot. VIII, 1916, p. 2943. — Perithecia innata, primitus solitaria, dein in seriebus longitudinalibus parallelis -2 cm. longis 2-3 mm. latis arcte congregata, epidermidem perrumpentia, ab eaque utrinque marginata denudata, globulosa, minute papillulata, atra, glabra 1-3 sticha 0,12 mm. lata, parenchymatice contexta, fossam nigram reliquentia. Asci clavati, apice rotundati, 90-100 × 9, 8-spori. Sporae fusoideae utrinque acutatae, medio septatae, non constrictae, hyalinae, 15-18 × 4, distichae. Paraphyses filiformes.

Hab. ad Schizostach yum emortuum (Graminaceae), Los Baños, Ins. Philipp. (C. F. BAKER).— A Did. eutypoides Rehm, peritheciis seriatim arcte aggregatis valde diversa.

14. Didymella glacialis Rehm.— Syll. IX p. 670. — var. juncicola Jaap, 6291 Verhandl. bot. Ver. Brandenb. LVI p. 82 (1914). - A typo recedit ascis magis cylindraceis, sporidiis monostichis paullo minoribus et quia calamicola, non foliicola.

Hab. in calamis emortuis Junci Jaquini (Juncaceae), in Passu Furca, alt. 2430 m., Helvetiae.

15. Didymella lussoniensis Sacc., Ann. Mycol. XII, 1914, p. 304. - 6292 Peritheciis laxe gregariis, subcutaneo-erumpentibus, subglobosis, nigris, 130-150 μ diam. ostiolo rotundo 25-30 μ diam. pertusis, contextu celluloso dilute fuligineo; ascis fusoideo-clavulatis, apice obtusulis, breviter stipitatis. 45-55 × 7-8, filiformi-paraphysatis, octosporis; sporidiis fusoideis, utringue acutulis, 14 × 3,5-4, diblastofarctis, dein tenuiter 1-septatis, non v. vix constrictis, hyalinis.

Hab. in caulibus emortais Dolichi uniflori (Leguminosae), Los Baños, Luzon, Ins. Philippin. (S. A. Reyes).

16. Didymella? apiahyana Spegaz., Rel. Mycol. trop., in Bol. Ac. Nac. 6293 Cienc. Cordoba, t. 23., 1919, Extr. p. 109. - Maculis nullis; peritheciis hine inde laxe gregariis, cortice innatis, epidermide tectis, prominulis lenticularibus, parvis, 0,5-1 mm. diam., minute acuteque ostiolato-papillatis, atris carbonaceis; ascis cylindraceis apice rotundatis, deorsum breviascule attenuato pedicellatis, octosporis, 100 ≥ 10-12, paraphysibus subgelatinosis subcoalescentibusque obvallatis; sporidiis ellipsoideo-obovatis v. oblanceolatis, utrinque, sed inferne praecipue, acutiusculis, grosse 3-guttulatis v. 3-blastibus, hyalinis,  $15-18 \times 6-8$ ; jodi ope uulla.

Hab. in ramis emortuis Leguminosa e ignotae, in silvis prope Apiahy, Brasilia, America austr. (J. Puiggari).

17. Didymella Collematum (Steiner) Vouaux, Bull. Soc. Mycol. de Fr. 6294 1913, p. 97, Cercidospora Coll. Steiner, Prodr. Fl. d. griech. Festl. p. 184. - Peritheciis apice tantum emergentibus, nigris, globosis, 200-350 µ diam., contextu obscuro, sub microscopio violaceo-fuligineo; ascis subcylindraceis, apice parum incrassatis, 6-8-sporis, 80.90 × 16-20; paraphysibus rarissimis, laxis, crassis, ramosis et hine inde anastomosantibus; sporidiis elongatis uno apice v. utrinque angustatis, 1-septatis, non constrictis, 22-28 \* 6-8.

Hab, in thallo Collematis granosi (Lichenes), prope Kutupa, Grecia (NIDER). - A D. pulposi ascis 6-8 sporis, sporidiis distincte majoribus diversa.

18. Didymella pulposi (Zopf) Vouaux, Didymosphaeria Zopf, Syll. XVI 6295 p. 502. - var. Garovaglii Vonaux, Bull. Soc. Mycol. de Fr. 1913,

p. 96.— A typo differt ascis fere semper tetrasporis, raro 5-6 sporis,  $62.80 \times 13.16$ ; sporidiis majoribus  $15.25 \times 7.10$ .

Hab. in thallo Endopyrenii Garovaglii (Lichenes), prope Béziers, Gallia (A. DE CROZALS).

19. Didymella crozalsiana (Oliv.) Vouaux, Bull. Soc. Mycol. Fr., 1913, 629 p. 98, Sphaeria crozalsiana Oliv., Par. Lich. Fr. p. 77, et var. saxicolae Oliv., l. c. Supp. p. 15.— Peritheciis sparsis parum numerosis, vix 2-3 gregariis, omnino immersis apice sublenticulari-depressis, quandoque sphaeroideis v. ovoideis et apice tantum visibilibus, ostiolo simplici praeditis, nigris, 200-300 μ diam., contextu pseudoparenchymatico, e cellulis polygoniis 5-6 μ diam. efformato, supra obscure brunneo-rubido, basi pallide rubrido; ascis cylindraceis, sursum late rotundatis, breviter pedicellatis, tenuiter tunicatis, octosporis, 82-110 × 9-13; paraphysibus filiformibus, parum ramosis septatisque, multiguttulatis, 1-1,25 μ cr.; sporidiis fusoideis utrinque subacuminatis apice superiore tantum quandoque obtusulis et tunc subconoideis, hyalinis, 1-septatis, (rarissime 3-septatis), grosse 4-guttulatis, 19-26 × 4,5-6 (Olivier, 25-32 × 5-7).

Hab. in thallo S q u a m a r i a e s a x i c o l a e et S q. l e n t i g e r a e (Lichenes), Beziers et Roquehaute, Hérault, Gallia (A. DE CROZALS).

20. **Didymella Bruni** Bouly de Lesdain in Vouaux, Bull. Soc. Mycol. 6297 fr., 1913 p. 101.— Peritheciis sparsis sed copiosis, raro binis confluentibus, ½ v. ½ emergentibus, raro subsuperficialibus, ostiolo depresso 9-12 lato praeditis, sphaeroideo-depressis, nigris, 100-250 μ diam.; contextu crasso obscure brunneo et supra parum olivaceo, basi pallide olivaceo, supra pseudoparenchymatico e cellulis polygoniis 4-6 μ diam. et membrana crassa praeditis efformato; ascis ventricosis, obpiriformibus, subsessilibus, membrana plerumque ad apicem incrassata, apice etiam rotundatis, octosporis, 58-70-20 × 22, demum cylindraceis, 75-98 × 18; paraphysibus copiosis, sinuosis, septatis, ramosis, anastomosantibus, ascos parum superantibus, 1,5-1,75 μ cr.; sporidiis primum subtristichis demum monostichis, ovoideo-oblongis, 1 septato constrictulis, utrinque late rotundatis, plerumque grosse 2-guttulatis, raro 3-4 guttulatis, loculo inferiore distincte angustiori, 20-27 × 7,5-10.

Hab. in thallo sterili nigrescenti Verrucariae sp. (Liche nes), Le Breuil Allier, Gallia (BRUN).

21. Didymella sphinctrinoides (Zwackh) Berl. et Vogl. — Syll. IX p. 628 671, XXII p. 160. — var. Lithoiceae (Boul. de Lesd.) Vouaux, Bull.

Soc. Mycol. Fr., 1913, p. 93, *Pharcidia Lithoiceae* Boul. de Lesd., Rech. Lich. Dunk. p. 274. — Ascis elongatis  $57.75 \times 12.15$ , octosporis; paraphysibus bene distinctis; sporidiis distichis saepe inaequilateris,  $18.21 \times 6.7$  (an  $15.21 \times 4.7$ ).

Hab. in thallo Verrucariae (Lithoicea) sp. et Verr. (Lithoicea) nigrescentis (Lichenes), Bergues, Gallia bor. (BOULY DE LESDAIN).— var. piriformis (Oliv.) Vouaux, Bull. Soc. Mycol. Fr., 1913 p. 94, Sphaeria piriformis Oliv., Par. Lich. Fr. Suppl. p. 19.— A typo vix distincta et minus etiam a var. Guineti et physciicola sporidiis angustioribus (14-22 \* 5-7), ascis 6-8-sporis.

Hab. in thallo X and horiae parietinae var. rutilantis (Lichenes), Roquehaute Herault, Gallia (A. DE CROZALS).

22. Didymella Ulothii (Körb.) Berl. et Vogl.— Syll. IX p. 671. — var. 6299 apiesporoides Vouaux ap. Bouly de Lesd. in Bull. Soc. Bot. Fr. LVI (1909) p. 175. — A typo differre videtur sporidiis eximie apiosporoideis, idest loculo inferiore angustiore elongato. — Asci semper octospori.

Hab. in thallo sterili saxicolo Lichenis cujusdam, Puy-de-Dome, Gallia (Breviére).

- 23. Didymella Coarctatae B. de Lesd. Syll. XXII p. 159. Dia-6300 gnosis sie completanda: Peritheciis membranaceis, 0,15.0,2 mm. diam., paraphysibus raris sed bene distinctis (Vouaux in Bull. Soc. Bot. Fr. LIX (1912) p. 16). In Lichenibus.
- 24. Didymella epipolytrope (Mudd) Sacc., Syll. IX p. 671. var. apio-6301 sporoides Vouaux in Bull. Soc. bot. Fr. 1909, p. 175 et in Bull. Soc. Mycol. Fr. 1913, p. 90. A typo recedit sporidiis distincte caudatis, 16-20 × 6-7, 5-6-8 in quoque asco.

Hab. in thallo lichenicolo sterili saxicolo, Puy-Crouel, Puy-de-Dome, Gallia (Brevière).— A var. Ulothii (Körb.) vix diversa, a var. caudata (Kern.) sporidiis minoribus distincta.

25. Didymella sphaerelloides Sacc., Nuovo Giorn. bot. it. v. XXVII, 6302 1920, p. 76. — Peritheciis hinc inde dense gregariis punctiformibus, vix 120-150  $\mu$  diam., nigris subcutaneo-erumpentibus, ostiolo 18  $\mu$  diam.; contextu celluloso-fuligineo; ascis crasse clavatis, apice obtusis, subsessilibus,  $50\text{-}54 \times 16$ ; paraphysibus diffluentibus; sporidiis oblique 1-stichis v. distichis, oblongo-cylindraceis, utrinque obtusulis,  $20\text{-}24 \times 6$ , saepe curvulis, 1-septatis, non constrictis, hyalinis.

Hab. in foliis emortuis Y u c c a e g l a u c a e (Liliaceae), Spo-

kane, Washington, Amer. bor. (WEIR). - Ad Sphaerellam nutat.

26. Didymella Menispermacearum Gz. Frag., Fungi Horti Matrit. 1917, 63 p. 12. — Peritheciis dense sparsis v. gregariis, e subcutaneo semierumpentibus, atris, globosis v. subconoideis, 120-200 μ diam., ostiolo vix papillato, pertuso, pariete aequi crassa, contextu parenchymatico atro-fuligineo; ascis oblongo-clavatis, breviter pedicellatis, apice rotundatis, crassiuscule tunicatis, rectis, curvulisve, 45-60 × 15-24, paraphysibus paucis gracilibus, evanidis, septulatis; sporidiis ir regulariter distichis v. conglobatis, obovato-cuneatis prope medium septatis crassiuscule tunicatis, loculis inaequalibus, super. latiore, obsolete guttulatis v. eguttulatis, 15-21 × 6-7, rarius usque ad 24 × 7.

Hab. in caulibus ramulisque siccis Menispermi caradeury, Cocculi japonici et C. caroliniani (Menispermaceae), in Horto bot. Madrid, Hispaniae (PROF. CABALLERO).

27. Didymella Mori K. Hara, Journ. Seric. Assoc. Japan, 1917, p. 388, 6304 cum icon.; Mycologia 1919, p. 148. — Maculis inconspicuis; peritheciis sparsis, punctiformibus nigris, epidermide demum lacerata tectis, globosis v. depresse globosis, 200-250 μ altis, 250-300 μ latis; contextu crasso pseudoparenchymatico, nigro, cellulis parum definitis; ascis cylindraceis v. elongato-clavatis, supra rotundatis, infra breviter pedicellato-attenuatis, 70-80 × 5-8, octosporis, paraphysatis; sporis oblique monostichis, fusoideis, ell ipsoideis v. subovoideis, utrinque leniter attenuatis, medio uniseptatis, plus v. minus constrictis, juvenilibus, 2-3 nucleatis, hyalinis, 12-15 × 5-6; paraphysibus filiformibus, ascos superantibus, 1 μ cr.

Hab. in ramulis Mori albae (Moraceae), Mino (Gifu-ken Prefect.), Kawakami mura, Japonia.

28. Didymella acutata Sydow, Philipp. Journ. of Sc., v. 9., Sect. C, n. 2, 6305 1914, p. 164. — Peritheciis epiphyllis, subepidermicis, plus minus aequaliter sparsis, saepe aequali distributione folia tota obtegen tibus, depresse globosis, 120-170 μ diam., atris, epidermide quasi clypeiformiter denigratula tectis, contextu opaco parenchymatico ex cellulis 8-10 μ diam. composito; ascis variabilibus, saepe curvatis, clavatis vel subsaccatis sursum plerumque angustioribus ad apicem incrassatis, 85-120 μ longis, 10-17 μ latis, octosporis, parcissime paraphysatis; sporidiis plerumque distichis, raro tristichis, fusoideis, medio 1-septatis, non constrictis, utrinque acutissime acuminatis et quasi acute apiculatis, hyalinis, 28-38 × 6-8.

Hab. in foliis emortuis Oraniae sp. (Palmae), Palawan Lake Magnao, Ins. Philipp. (MERRILL).

29. Didymella pandanicola Sydow, Philipp. Journ. of Sc. v. 9., Sect. 6306 C, n. 2, 1914, p. 164. — Peritheciis amphigenis, aequaliter distributis, plerumque 2.4 densius aggregatis et cuticula nigrificata maculiformi tectis, applanato-globosis, 150-170 μ diam., atris; ascis cylindraceo-clavatis, subsessilibus, 75-95 μ longis, 14-16 μ latis, octosporis, parcissime paraphysatis; sporidiis distichis, fusiformibus, medio 1-septatis, non constrictis, hyalinis, utroque apice seta 8-10 μ longa 1 μ lata auctis, 28-33 μ longis (sine setis), 7-8 μ latis.

Hab. in foliis emortuis Pandani (Pandanaceae), Palawan, Silanga, Ins. Philipp. (MERRILL).

30. Didymella kariana Sacc., Ann. Mycol. XII, 1914, p. 301. — Peritheciis epiphyllis, laxe gregariis, depresso-globosis, poro rotundo 18 μ diam., pertusis, 200 μ diam., nigris, contextu obsolete celluloso, ochraceo-fuligineo; ascis tereti-clavatis, apice rotundatis in stipitem brevissimum sensim tenuatis, 55-65 × 7-9, copiose filiformi-paraphysatis, octosporis; sporidiis distichis, fusoideis, utrinque obtusiuscule attenuatis, curvulis, 16-18 × 4,5, medio septatis, leviter constrictis; typice 4-guttatis, hyalinis.

Hab. in foliis morientibus Polygon i sp. latifoliae (Polygonaceae), socia Uredine Pucciniae Polygoni (?) et Darluca filo, Mussocrie, Himalaya, India or., alt. 1000 m. (P. C. KAR).

31. Didymella eupyrena Sacc., Syll. I p. 554, Notae Mycol. XXI p. 6308 37 (Nuovo Gior. bot. it. 1917).

Hab. in caulibus emortuis A e o n i t i L y c o e t o n i (Ranunculaceae), « Piccolo S. Bernardo », Italia bor.— Est forma ascis  $80\text{-}90 \times 9\text{-}11$ ; sporidiis  $14,5\text{-}15 \times 6$ , monostichis; peritheciis  $250\text{-}300~\mu$  diam. erumpenti-superficialibus nigris, nitidis.

32. Didymella adeana Rehm, Ann. Mycol. X, 1912, p. 391.— Perithecis innatis, dispersis, demum epidermide dejecta in cortice interiore nigritula sessilibus, globulosis, 0,3-0,4 mm. diam., poro pertusis, hand distincte papillulatis, excipulo membranaceo, parenchymatico, fusco, hyphis fuscis longis, 4 µ crassis obsesso; ascis cylyndraceis, apice rotundatis, octosporis, 8 × 10; sporis ellipsoideis, utrinque rotundatis, medio septatis et paululum constrictis, hyalinis, 20 × 6, 1-1,5-stichis; paraphysibus filiformibus.

Hab. ad caulem putrescentem Aconiti taurici Wulf. (Ranunculaceae), Steinernes Meer prope Funkensee, alpium Bav. Berchtesgadem (ADE). — Magnitudine peritheciorum Did. Epilobii

proxima sed papilla et tomento deficientibus diversa.

33. Didymella superflua (Awd.) Sacc. — Syll. I p. 556. — var. Tha 631 lictri Gz. Frag., Fungi Horto Matr., 1917 p. 13, fig. 1. - Peritheciis subcutaneo-erumpentibus, majusculis, 150-270 µ diam., non papillatis, saepe vix umbilicatis ostiologue minuto pertusis; contextu parenchymatico; ascis tereti-clavatis, breviter pedicellatis, 60-80 \* 10-12, paraphysatis; sporidiis monostichis, raro subdistichis, hyalinis, oblongo-obovatis, 1-septatis, constrictis, 12-18 × 5-7, loculis plerumque 1-4-guttulatis.

Hab. in caulibus emortuis Thalictri simplicis, Th. trigyni, Th. alpini (Ranunculaceae), in Horto bot. Madrid, Hispaniae (A. CABALLERO). — var. Withaniae Gonz. Frag., Microm. de Melilla, in Mem. Soc. Españ. Hist. Nat. t. VIII, 1916, p. 340.—A typo differt ascis amplioribus,  $56.70 \times 20.30$ , parietibus crassis, ascosporis distichis, 18-22 > 6-7, loculis inaequalibus 1-2 guttulatis, paraphysibus obvallatis.

Hab. in caulibus ramulisque siccis Withaniae frutes c e n t i s (Solanaceae), prope Melilla, Hazuga, Marocco.

34. Didymella eutypoides J. E. Chenantais, Bull. Soc. Mycol. de Fr., 6311 XXXV, 1919, p. 130, fig. 23. — Peritheciis minutis, 2-300 μ, tectis, 2-3 sociatis, fuscis globoso-depressis fere nummiformibus, collabescentibus, cortice nigrefacta adnatis, crasse papillatis, aut immersis, mutuâ pressione deformibus, crustâ nigra ostiolis crassis vix exsertis hiantibus punctata tectis, epidermide cinctâ nucleo albido persistente; ascis clavatis, stipitatis, apice rotundatis, tunicatis, 8-sp., paraphysibus ramosis copiosis obvallatis, 180 \* 25; sporidiis didymis fusoideis utrinque attenuatis v. rotundatis medio constrictis, guttulatis, hyalinis, 20-25 × 6-7.

Hab. in cortice Populi nigrae (Salicaceae), in vallo Pontdu Cens, Nantes, Gallia. - Peritheciis sparsis ad Didymellam nummulariam, immersis ad D. diaporthoidem pertinent.

35. Didymella montivaga Bubàk, III Beitr. Pilz. Montenegro, in Bo- 6312 tanikai Közlemények, 1915, p. (57). — Peritheciis gregariis vel saepe dense seriatis, tectis, solum papilla brevissima erumpentibus, postea nudis superficialibus, globoso-applanatis, 300.400 µ in diam., nigris, nitidis, tunica crassa, grosse pseudoparenchymatica, intus fusca, extus fere atra; ascis cylindraceis, 90-120 × 9-13, apice late rotundatis, non vel parum incrassatis, breve pedicellatis, paraphysibus filiformibus obvallatis, octosporis; sporidiis distichis vel subdistichis, calceoliformibus, 18-22 - 5,5-7,5 rectis, uniseptatis, loculo

superiore duplo longiore, parum latiore, hyalinis, eguttulatis.

Hab. in caulibus emortuis Scrophulariae bosniaeae (Scrophulariaceae), Lokvice (ca. 1900 m.) in montibus Durmitorensibus et in monte Lojanik ad Dobri do (Distr. Durmitorensibus), Montenegro.

36. Didymella fructicola (Naoumoff) Sacc., Didymosphaeria fructicola 6313 Naoumoff, Champ. Oural, I (1915) p. 20, t. 1 f. 2.— Peritheciis globosis, immersis ostiolo erumpentibus, 175 μ lat., 160 μ altis; ascis cylindraecis, paraphysatis, 82 × 11 (part. sporif.); sporidiis oblique monostichis, octonis, ellipsoideis, medio constrictis, 13-14 × 8,3, hyalinis, loculo superiore vix crassiore.

Hab. in fructibus Veronicae Chamaedryos (Scrophulariaceae), in Gub. Perm, Ural, Rossia.

37. Didymella tiliaginea Fautr. et Lam. — Sacc., Syll. XIV p. 535.— 6314 Hab. in ramis vivis Tiliae microphyllae (Tiliaceae), Paris, Galliae (Hariot). — Perithecia 300-350 μ diam., ostiolo 25 μ diam. pertusa; asci paraphysati 70-80 × 11; sporidia oblonga, utrinque rotundata, 1-septata, primo muco tenui obducta, 20 × 7-7,5. — A typo videtur recedere peritheciis lenticularibus, non globosis, mox denudatis, sporidiis diblastis, non 4-guttatis. An ab aetate ? (Sacc., Notae Myc. XX, Nuovo Giorn. bot. it. 23., 1916, p. 222).

DIDYMELLINA v. Höhnel, Ann. Mycol. 16., 1918, p. 66.— Est Didymella paraphysibus destituta. — Jope n. — Typus gen.:

Didymellina Iridis (Desmaz.) v. Höhn., Dothidea Iridis Desmaz., Syll. 6315
 II p. 178.— Syn. sec. v. Höhn.: Sacidium Desmazierii Mont., Sphaerella Iridis Auersw.

DIPLOCARPON F. A. Wolf, in Bot. Gaz. LIV (1912) p. 231. — Perithecia e scutulo subcutaneo et excipulo innato constituta; scutulo mycelio subcutaneo, late extenso, atro-brunneolo insidente, margine radialiter diffuso, contextu membranaceo, astomate sed centro stellatim dehiscente; apothecio innato, primo scutulo separato, maturitate margine adjuncto. Asci oblongi, filiformi-paraphysati octospori. Sporidia ellipsoidea, 1-septata, hyalina.

Diplocarpon Rosae F. A. Wolf, loc. cit., tab. 13.— Peritheciis epi-6316
phyllis, globosis vel disciformibus, 100-250 μ diam., scutulo atrobrunneo, subcutaneo, mycelio reticulato insidente, orbiculare, margine plus minusve radioso; apothecio primo epidermide tecto, demum margine scutuli adjuncto, in centro irregulariter stellatim de-

hiscente; ascis oblongis vel subclavatis, supra obtuse angustatis, 70-80  $\approx$  15; paraphysibus filiformibus, apice incrassatis, interdum 1-septatis; sporidiis irregulariter distichis, oblongo ellipsoideis, inaequaliter bicellularibus, ad septum constrictis, guttulatis, hyalinis,  $20-25 \approx 5-6$ .

Hab. in foliis dejectis Rosa e sp. (Rosaceae) in Amer. bor. et verisim. in Europa. — Sistit status ascophorus Actinonematis Rosae.

MASSARINULA Gen. de Lamarl.— Syll. XIV p. 386, XVI p. 483, XVII p. 658, XXII p. 160.

1. Massarinula Cordiae Rehm, Ascomyc. Philipp. V, Leaflets of Phi-6317 lipp. Botany, VI (1914) p. 2199. — Peritheciis in ligno dealbato gregariis, primitus innatis, mox emergentibus et dimidia parte immersis, globulosis, atris, glabris, minute papillulatis, poro perspicuo pertusis, subcarbonaceis, 0,5-1 mm. diam.; ascis clavatis, octosporis, 60 × 10, paraphysibus teneris, ramulosis, J-; sporidiis 1-2-distichis, oblongis, utrinque obtusis, plerumque medio, rarius paullulum infra medium septatis, non constrictis, strato mucoso tenui obductis, hyalinis, 12 × 5-6.

Hab. in Cordia Myxa decorticata (Borraginaceae), Luzon, Prov. Laguna, Los Baŭos, ins. Philipp. (M. B. RAIMUNDO).

2. Massarinula bambusincola Rehm, Ascom. Philippin. VIII, in Leafit. 6318 of Philipp. Bot. VIII, 1916, p. 2944. — Perithecia innata, peridermio tecta globosa minutissime papillulata seriatim longitudinaliter aggregata, hemisphaerice protuberantia, nigra, crasse parenchymatice contexta 0,5-0,7 mm. lata; asci clavati 70-75 × 12, 8-spori; sporae fusoideae, utrinque obtusae interdum subcurvatae medio septatae, non constrictae, cellula superiore interdum latiore, hyalinae, 18-20 × 4-5, distichae, paraphyses filiformes.

Hab. ad emortuam Bambusam vulgarem (Graminaceae), Los Baños, Ins. Philipp. (S. A. REYES).

3. Massarinula donacina Rehm, Ascom. Philippin. VIII, in Leaflt. of 6319 Philippin. Bot. VIII, 1916, p. 2944.— Perithecia in maculis viridulo-fuscis, circiter 1 cm. latis, demum albidulis gregarie innata, subconoidea, minute papillulata, glabra, atra, carbonacea, 0,5-0,8 mm. lata; asci clavati, 36-40 × 7, 8-spori; sporae fusiformes, medio septatae non constrictae, hyalinae, 10 × 3, distichae, paraphyses filiformes conglutinatae.

Hab. ad calamos Donacis cannaeformis (Graminaceae), Los Baños, Ins. Philipp. (M. B. RAIMUNDO).

4. Massarinula Oleae J. E. Chenantais, Bull. Soc. Mycol. de Fr., XXXV 6320 1919, p. 68 et p. 136, fig. 25. — Peritheciis parce gregariis nunc corticolis et semi-infossis, nunc lignicolis et superficialibus hemi-sphaericis, 1-2 mm., ostiolo brevi papillato nitido v. poriformi; ascis crasse tunicatis plus minusve stipitatis paraphysibus simplicibus copiose obvallatis, 100·130 × 15·18, in typo octosporis, sporidiis saepe plurimis abortis; sporidiis hyalinis didymis medio constrictis strato hyalino tenuissimo circumdatis, episporio crasso, 4 v. pluri-guttulatis, dein eguttulatis, plasmate in loculis bipartito pseudosepta distincte in vetustis aemulante, 29-32 × 11-13.

Hab. in ligno carioso Oleae (Oleaceae), Toulon, Gallia.

5. Massarinula Vitalbae J. E. Chenantais, Bull. Soc. Mycol. de Fr., 6321 XXXV, 1919, p. 68, fig. 11, d, e.— Peritheciis paucis minutis, laxe gregariis, cortice tectis, ostiolo vix exserto denique hiante; ascis cylindraceo-clavatis apice incrassatis, stipitatis, 130 × 15, paraphysatis; sporidiis mono vel distichis fusoideis, constricto-1-sept., 4-6 guttulatis, circulo hyalino cito aqua turgido, 12-15 μ circumdatis; 22-28 × 7-8 sine muco.

Hab. in cortice Clematidis Vitalbae (Ranunculaceae), Rigny, Gallia (FLAGEOLET).

6. Massarinula obliqua Sace., Ann. Mycol. XIII n. 2 (1915) p. 127.— 6322 Majuscula, laxe gregaria; peritheciis cortice nidulantibus non v. vix erumpentibus, globoso depressis, 700-800  $\mu$  diam., nucleo griseo, dein atro, contextu denso parum distincto, ostiolo parum manifesto; ascis tereti-clavatis, amplis, 200  $\times$  30-40, apice rotundatis, sensim breviter stipitatis, octosporis, copiose filiformi-paraphysatis; sporidiis distichis oblongis, curvis, 50-60  $\times$  23-24 (muco 4-5  $\mu$  cr. hyalino incluso), utrinque subrotundatis. 1-septatis, non v. vix constrictis, hyalinis.

Hab. in ramis emortuis Mischocarpi fuscescentis (Sapindaceae), Los Baños, Ins. Philipp. (BAKER). — Ab affinibus Massarinula italica et M. chilensi sporidiis manifeste obliquis seu eurvulis imprimis distincta.

RHABDOSTROMA Syd., Ann. Mycol. 14., 1916, p. 362 (Etym. rhabdos virga, et stroma).— Stromata elongato-linearia subepidermalia matricem rimose disrumpentia ex hyphis brunneolis parallelis composita. Perithecia pariete proprio ex hyphis concentrice dispositis brunneis composito praedita, globulosa, in singula serie disposita, paraphysibus praedita, ostiolis minutis stromata perforantibus; asci

octospori; paraphysibus genuinis nullis. Sporidia hyalina prope basim uniseptata.

- 1. Rhabdostroma Rottboelliae (Rehm) Syd., Ann. Mycol. 14., 1916, p. 6323 362, Apiospora curvispora (Speg.) Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 399, var. Rottboelliae Rehm. l. c. Leafl. Phil. Bot. 1914 p. 2199. - Scirrhiella curvispora Speg., Syll. IX p. 1030. — Stromatibus 0,5-1 (interdum confluentibus ·2 cm.) longis; peritheciis confluentibus, monostichis, conspicue minute papillulatis; ascis subfusiformiter clavatis, sessilibus, ca. 100 × 18, octosporis, paraphysibus filiformibus 4-5 µ cr., septatis guttulatisque; sporidiis distichis, oblongo-clavatis, apice superiore obtuso latiore, inferiore angustato, 35-40 × 7-10, in parte tertia subcurvatis, ibique 3.5 µ supra basim transverse septatis, non constrictis, hyalinis.
  - Hab. in culmis emortuis Rottboelliae exaltatae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BA-KER). - Differt ab A. curvispora modo papillodis exacte conspicuis, sporidiis non guttulatis; ab A. luzonensi Henn. sporidiis majoribus non constrictis vix diversa. Simillima etiam videtur Ap. camptospora Penz. et Sacc. modo « ascis cylindraceis crasse tunicatis », diversa.
- PLAGIOSTOMELLA v. Höhnel, Ann. Mycol. 16., 1918, p. 52; 17., 1919, p. 131. - Differt a Plagiostoma Fück. sporidiis loculis maequalibus praeditis. - Typus generis:
- 1. Plagiostomella carpinicola v. Höhn. 1918, l. c. (= Apiospora carpi- 6324 nea Rehm, Syll. III p. 189).
- APIOSPORELLA v. Höhn., Fragmente VIII, n. 389 (1909) nec Spegazzini 1910 (Deuteromycetae). - Est Apiospora stromate destituta.
- 1. Apiosporella cornina Ch. E. Fairman, Mycologia 10., 1918, p. 243. 6325 Peritheciis sparsis v. gregariis depresse globosis v. distincte depressis primum epidermide pustulatim elevata tectis, suberumpentibus nigris 200-250 µ diam.; ascis clavato-cylindraceis, breviter stipitatis apice rotundatis 8-sporis, 40-50 × 13-15, paraphysibus filiformibus obvallatis; sporis irregulariter distichis, oblongo-obovatis utrinque subrotundatis, uniseptatis, non constrictis loculis inaequalibus inferiori distincte minori, loculo superiori longiori et duplo crassiori, hyalinis demum flavo-auratis,  $20-23,33 \times 6,66-7$ .

Hab. in matrice non indicata ( ? Cornus), Ute Park Colfax

C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

APIOSPORA Saec. — Syll. I p. 539, IX p. 659, XI p. 301, XIV p. 534, XVI p. 477, XVII p. 658, XXII p. 160.

1. Apiospora aberrans (Syd.) Sacc., Apiosporella Syd., Enum. Philipp. 6326 Fungi II, in Philipp. Journ. of Sci. VIII (1913) p. 486.— Peritheciis plus minusve aequaliter sparsis, solitariis in stromate effuso atro parce evoluto insidentibus, globosis, atris, subcarbonaceis, vertice per epidermidem fissam erumpentibus, 150-190 μ diam., distincte papillatis, pariete crasso, inferne vix evoluto, contextu opaco, nucleo albo; ascis clavatis, apice rotundatis, breviter stipitatis, 52-75 × 16-19, octosporis, filiformi-paraphysatis; sporidiis distichis, ellipsoideis vel oblongis, utrinque obtusis, diu continuis, tandem prope basim distincte 1-septatis, hyalinis, 16-26 × 6,5-11,5, cellula inferiore 3-4 μ tantum longa.

Hab. in culmis Bambusae (Graminaceae), emortuis, Luzon, Manila, ins. Philipp. — A typo generico recedit peritheciis in macula stromatica insidentibus, parte basali excipulo vix evoluto.

2. Apiospora Coryphae (Rehm) Sacc., Apiosporella Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 399. — In mycelio tenuissime et latissime effuso, cortici arcte adhaerente, fuscidulo, parenchymatice dilute fuscidule contexto, algarum cellulis carente; peritheciis in plagulis subcircularibus nigritulis gregarie plurimis consociatis, globulosis, 150 μ latis, apice subhyalinis, excipulo parenchymatice fusce contexto, tenuissimo; ascis ellipsoideo clavatis, sessilibus, teneris, 35-40 × 10-12, octosporis, aparaphysatis; sporidiis distichis, clavatis, rectis, infra medium septatis, non constrictis, hyalinis, cellula superiore 12 × 5, inferiore 4 × 5 longa.

Hab. in petiolis emortuis Coryphae elatae (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER).

OXYDOTHIS Penz. et Sacc. — Syll. XIV p. 674, XXII-p. 409. — Stroma cum sit spurium a Dothideaceis ad Sphaeriaceas referendum genus. — Cnfr. Syll. v. XXIV Sect. I p. 538.

1. Oxydothis aequalis Syd., Ann. Mycol. 15., 1917, p. 208.— Perithecia 6328 per partes majores matricis aequaliter denseque dispersa, plagulas plus minus effusas saepe caulem ambientes formantia, pseudo-stromate tenui saepe conjuncta, lenticularia, usque 0,5 mm. lata, atra, epidermide griseo atrata semper tecta, ostiolo minutissimo, contextu parietis irregulariter fibroso: asci subcylindracei, tenuissime tu-

nicati,  $200.300 \times 10$ -13, octospori, paraphysati; sporae distichae, fusoideae, utrinque acutissimae, medio 1-septatae, non constrictae, hyalinae, 70-80 × 7-8.

Hab. in culmis bambusinis (Graminaceae), Biliran, Ins. Philipp. (R. C. Mc GREGOR).

2. Oxydothis Höhnelii (Rehm) Sace., Merrilliopeltis Höhnelii Rehm, Ascomyc. Philipp. I, in Philipp. Journ. of Sci. VIII (1913) p. 186. — Peritheciis in maculis 5-9 mm. latis, plus minusve arcte gregarie innatis, epidermide elypeiformiter denigrata, 0,4-0,5 mm. ·2 cm. diam. obtectis, demum denudatis, globoso lenticularibus, substromatice positis, 250-300  $\mu$  diam., fusco-nigritulis, ostiolo globulosominimo prominente; ascis cylindraceis, tenuibus, ca. 300 × 12-15, paraphysibus filiformibus perpaucis obvallatis, octosporis; sporidiis distichis, fusiformibus, rectis, utrinque acutatis, medio septatis, non constrictis, utraque apice filiformiter 5  $\mu$  long. appendiculatis, hyalinis, 50-75 × 6-7.

Hab. in petiolis emortuis Arengae (Palmae), Luzon, prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

3. Oxydothis tayabensis (H. S. Yates) Trotter, Merilliopeltis tayabensis 6330 H. S. Yates, Philipp. Journ. Sc. XII (1917) p. 377. — Peritheciis solitariis vel plus minusve dense maculiformiter dispositis, sub cortice positis dein epidermide elevata et pertusa, pseudostromata atra, effusa, saepe conjuncta, sublenticularia, 350-500 μ lata, 100-150 μ alta; ostiolo minutissimo, vix perspicuo, contextu opaco, ascis elongato-clavatis, apice valde incrassatis, stipitatis, 210-230 × 12-14 in perithecio fere horizontaliter dispositis; paraphysibus paucis; sporidiis plerumque distichis, fusiformibus, ad medium 1-septatis, non constrictis, hyalinis, utrinque longe et acutissime attenuatis, 90-100 × 5-7.

Hab. in trunco emortuo Calami sp. (Palmae), Basiad, Tayabas Luzon, Ins. Philipp. — Affinis Oxyd. Höhnelii Rehm.

4. Oxydothis Daemonoropis (Syd.) Syd., Ann. Mycol. 15., 1917, p. 208, 6331 Merrilliopeltis Daemonoropis Syd., Enum. Philipp. Fungi II, in Philipp. Journ. of Sci. VIII (1913) p. 484. — Peritheciis in maculis 1-3 cm. longis densiuscule dispositis, pseudostromate spurio effuso saepe conjunctis, lenticularibus, 200-400 μ latis, epidermide lenissime elevata sed vix atrata tectis, ostiolo vix perspicuo praeditis, contextu opaco parenchymatico e cellulis 8-10 μ diam. composito; ascis longe clavatis, paraphysibus nullis vel perpaucis; sporidis 2-4-stichis, inaequilateris, medio 1 septatis, non constrictis, ad api-

ces acutissimis, hyalinis, 100-120 × 8-10.

Hab, in Daemonoropide Gaudichaudii emortuo (Palmae), Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (MERRILL). - Specimina vetusta, ascis jam dissolutis, sed certe hujus generis.

5. Oxydothis Livistonae Syd., Ann. Mycol. 15., 1917, p. 208. — Peri- 6332 thecia plus minus aequaliter denseque distributa, rotundata vel ellipsoidea, 0,5-1 mm. diam., applanata, lenissime convexula, in maturitate nitida, pseudostromate tenui atro effuso saepe conjuncta, subenidermalia, ostiolo minutissimo praedita, pariete irregulariter fibroso molli opaco, cavitate interiore 350-500 µ lata, usque 150 µ alta; asci longe c'avati, tenuiter tunicati, superne gelatinoso-mitrati, usque 300 a longi, 11-14 a lati paraphysati; sporae octonae. elongato-fusoideae, medio septatae non constrictae, hyalinae, utrinque acutissimae, 130-150 µ longae, medio 5-6 µ latae, 2-3-stichae.

Hab, in petiolis Livistonae sp. (Palmae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

BERTIA De Not. -- Syll. I p. 581, IX p. 687, XI p. 305, XIV p. 541, XVI p. 489.

1. Bertia Puttemansii P. Henn., Hedw. vol. 48. (1908) p. 9. — Perithe 6333 ciis caespitose gregariis, ovoideis, atris, subpilosis, 400-600 µ diam., dein collapso-capulatis; ascis clavatis, pedicellatis, vertice obtuse rotundatis, 55-80 × 10-18, octosporis, paraphysatis; sporidiis subdistichis, oblongis, curvulis, utrinque obtusis, medio 1-septatis, haud constrictis, hyalinis,  $15-22 \approx 5-7$ .

Hab. in cortice arboris cujusdam, Serra da Cantareira, S. Paulo, Brasilia.

DIMERINOPSIS Syd., Annales Mycol. 15., 1917, p. 202 (Etym. a Dimerina, cui affinis inter Sphaeriaceas). - Perithecia omnino superficialia, mycelio insidentia, glabra, globulosa, parenchymatice contexta, papillata, tandem cupuliformiter collapsa, mollia, coriaceosubcarbonacea. Asci minuti, cylindracei vel clavati aut ventricosi, paraphysati. Sporae oblongae, hyalinae, bicellulares. Est quasi Dimerina papillato-ostiolata (cum Melanopsamma etiam comparandum).

1. Dimerinopsis luzoniensis Syd., I. c. Perithecia in mycelio Meliolae 6334 parasitica; mycelium hyphas Meliolae dense amplectens, ex hyphis tenuibus ramosis et copiose anastomosantibus tandem pelliculam tenuem formantibus flavidulis 2-3 µ latis compositum; perithecia

superficialia, applanato-globosa vel globoso-conoidea,  $100\text{-}145~\mu$  diam. glabra, levia, distincte papillato-pertusa, poro ca.  $12\text{-}15~\mu$  lato, opace brunneo-atra, parenchymatice ex cellulis 7-9 diam. fuscidulis vel flavo-fuscis contexta; asci fasciculati, cylindraceo-clavati, ad apicem rotundati, sessiles,  $28\text{-}35 \times 9\text{-}10$ , copiosissime paraphysati, 8-spori; sporae plerumque distichae, oblongae, 1-septatae, non constrictae, hyalinae,  $9\text{-}10 \times 2,5\text{-}3,5$ , cellula superiore plerumque paullo latiore.

Hab. parasitica in mycelio Meliolae cujusdam ad folia Cystandrae spec. (Gesneriaceae), Mt. Banahao, Laguna, Ins. Philipp. (H. S. YATES).

- 2. Dimerinopsis mindanaensis (P. Henn.) Syd., l. c. Ita vocandum 6335 Dimerosporium mindanaense P. Henn. Syll. XXII p. 34.
- melanomyces Syd., Ann. Mycol. 15., 1917, p. 196 (Etym. melas niger et myces).— Perithecia superficialia, basi immersa, inter cuticulam et epidermidem oriunda, irregulariter globosa, solitaria vel bina connata, parenchymatice contexta, coriaceo-carbonaceo atra, astoma, tandem vertice irregulariter aperta, nucleum paullo gelatinosum includentia; asci cylindracei, hyphis filiformibus paraphysoideis numerosis separati, octospori; sporae oblongae, hyalodidymae. Adsunt status sequentes metagenetice connexi: dematicaceus genus Hadronema Syd. (cfr. Annal. Myc. VII, 1909, p. 172) sistens, et pycnidicus; pycnidia peritheciis similia; pycnidiosporae ellipsoideae, continuae, hyalinae, copiose evolutae, sporophoris nullis.
- 1. Melanomyces quercinus Syd., l. c.— Plagulas aterrimas amphigenas 6336 primitus orbiculares sed mox effusas confluentesque 1-5 cm. longas vel latas densas rarius laxiores formans; perithecia inter hyphas Hadronematis dense stipatas solitarie vel densiuscule disposita, basi immersa, mycelio ex hyphis crassis articulatis brunneis formato deorsum per epidermidem penetrante, si ngula globosa vel irregulariter globosa, 140-200 μ diam. aterrima parte basali stromatica, parietibus lateralibus 20-30 μ crassis parenchymatice e cellulis exterioribus usque 10 μ diam., interioribus minoribus 4-7 μ diam. contextis, astoma, tandem vertice irregulariter aperto; asci cylindracei, breviter stipitati, 60-80 × 9-11, octospori, hyphis filiformibus paraphysoideis ca. 1,5 μ crassis separati; sporae plerumque distichae, in ascis elongatis pro parte monostichae, oblongae, utrinque rotundatae vel breviter attenuatae, medio septatae, non constrictae, hyalinae, 12-15 × 5-6.

Hab. in foliis Quercus spec. (Fagaceae), Panai, Benguet, Luzon, Ins. Philipp. (MARY STRONG CLEMENS).

- MELANOPSAMMOPSIS G. Stahel, Mededeel. v. het Dep. van d. Landbouw in Suriname n. 6, 1916; De Zuid.-Amerikaansche Hevea-Bladziekte verooszaakt door Melanopsammopsis Ulei n. gen., l. c. Bulletin n. 34, 1917, 111 pag. et tab. I-XXIX (Etym. a Melanopsamma cui affine).— Est Melanopsamma parasitica et paraphysibus carenti.— Typus gen.:
- Melanopsammopsis Ulei (P. Henn.) G. Stahel, l. c., Dothidella Ulei 6337
   P. Henn. (Syll. XVII p. 849). Formae conidicae sistunt: Aposphaeria Ulei P. Henn., Fusicladium macrosporum Knijper, Passalora Heveae Massee, Scolicotrichum Griff. et Maubl.

Hab. in Hevea (Euphorbiaceae), America australi.

MELANOPSAMMA Niessl. — Syll. I p. 575, IX p. 682, XI p. 303, XIV p. 539, XVI p. 486, XVII p. 658, XXII p. 162.

1. Melanopsamma andina Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6338 Buenos Aires XXIII p. 53 (1912). — Maculis nullis; peritheciis sparsis vel gregariis, per corticis rimas erumpentibus, primo tectis dein, peridermio secedente, superficialibus vix basi insculptis, globosis, 180-250 μ diam., levibus, eximie ostiolato-papillatis contextu indistincto; ascis cylindraceis, breviter attenuato-pedicellatis, 110-120 × 15, paraphysibus paucis filiformibus vix longioribus cinctis; sporidiis mono-vel distichis, ellipsoideis, utrinque rotundatis, medio septatis et leniter constrictis, 22-25 × 10, loculo superiore vix turgidiore, hyalinis, serius pallidissime rufis.

Hab. in truncis ramisque Acanthocladii spinescentis (Compositae), in montanis Potrerillos prope Mendoza, Argentina.

2. Melanopsamma Salviae Rehm in Strasser, Ann. Mycol. IX, 1911, 6339 p. 80. — Peritheciis in caule subdenigrato gregariis, innatis, dein erumpentibus, subglobosis, atris, haud papillulatis, poro vix conspicuo pertusis, 0,3-0,5 mm. diam., excipulo crasso fusco, ad basim hyphis longis, rectangulariter ramosis, subfuscis, septatis, 3-4 μ cr., obsessis; sporis ellipsoideis, medio constricto-septatis, utraque cellula guttis 2 magnis oleosis repleta, hyalinis, -15 \* 5, distichis; paraphysibus filiformibus.

Hab. ad caulem Salviae glutinosae (Labiatae), Ybbsitz, Austriae inf. (P. LAMBERT). — M. mendaci Sacc. et Roum. proxima.

Melanopsamma nitens Rehm. — Syll. XVII p. 659 — var. Talaumae 6340
 Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany VI (1914)
 p. 2200. — Sporidis medio septatis, hand guttatis, cellulis mox secedentibus, 8 \* 2.

Hab. in foliis Talaumae villarianae (Magnoliaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

4. Melanopsamma cylindrospora Speg., Mycet. Argent. VI, Anal. Mus. 6341 Nac. Buenos Aires XXIII p. 53 (1912).— Peritheciis sparsis, primo tectis dein denudato-superficialibus, ligno obscure cinereo-atro insidentibus, vix basi insculptis, glabris, coriaceis, opacis, 250-300 μ diam., ostiolo non papillato praeditis, contextu subcarnosulo, imperspicue subparenchymatico, olivaceo; ascis cylindraceis, breviter attenuato-pedicellatis, 150 × 10, densissime paraphysatis, jodii openulla; sporidiis recte monostichis, cylindraceis, utrinque obtusissime rotundatis, prope medium septatis, non constrictis, 18-20 × 8, hyalinis.

Hab. in ramulis aridis Condaliae lineatae (Rhamnaceae) in dumetis Potrerillos, prope Mendoza: Argentina.

5. Melanopsamma pomiformis Sacc. — Syll. I, 575 — var. monosticha 6342. Keissler in Beitr. Bot. Centrlbl. Abt. II, Bd. XXIX (1912) p. 400. — A typo differt ascis majoribus, 120 × 15 et sporidiis quoque majoribus, 22 × 9, in asco monostichis. A var. minor Sacc. differt praeterea ob sporidia non guttulata.

Hab. in ramis siccis Sorbi Ariae (Rosaceae), in Karawanken, Carniola.

6. Melanopsamma sphaeroidea W. Kirschst., Krypt. Fl. Brandenb. VII 6343 p. 225 (1911). — Peritheciis superficialibus, plus minusve dense gregariis, e basi applanata sphaeroideo-depressis, 150-200 μ diam., ostiolo minuto praeditis, excipulo atro, tenui, fragili, dense contexto, calvo, tenuiter ruguloso; ascis cylindraceis vel obelavatis, brevissime pedicellatis, sursum rotundatis et valde incrassatis, octosporis, 60-80 × 14-20, paraphysibus copiosis, filiformibus, ramosis, ascos superantibus; sporidiis irregulariter distichis vel inferne subtristichis, ellipsoideis, elongato-ovoideis vel fere clavatis, utrinque rotundatis, rectis vel parum curvatis, initio grosse 2 guttulatis, bilocularibus, non constrictis, hyalinis, dein brunneolis, 20-26 × 7-8.

Hab. in ligno decorticato Salicis cinereae (Salicaceae), Rathenow in Germania. — Affinis M. suecicae Rehm sed plurimis notis distincta.

7. Melanopsamma emersa Rehm, Ann. Mycol. X, 1912, p. 391. - Peri- 6344

theciis arete congregatis, primitus epidermide tectis, dein denudatis, globoso-conoideis, atris, haud opacis, minute papillulatis, glabris, ad basim hyphis subfuscis, subramosis,  $4 \mu$  cr., obsessis, excipulo haud carbonaceo, crasso 0,3-0,4 mm.; ascis clavatis apice rotundatis,  $90 \times 14$ , octosporis; sporis oblongo-fusoideis, rectis, utrique rotundatis, medio septatis, non constrictis, utraque cellula 1.2 guttata,  $25 \times 4$ , distichis; paraphysibus filiformibus.

Hab. ad ramulum Salicis retusae (Salicaceae), in alpe Lechleiten, Tiroliae (ADE). — Mel. sphaeroideae Kirschst. proxima sed differt peritheciis primum immersis nec tantum superficialibus, magnitudine minoribus, sporis hyalinis nec demum brunneolis.

- 8. Melanopsamma aquatica (Plöttn. et Kirschst.) Kirschst. in Krypt. 6345 Flora Brandenb. VII p. 226 (1911). — Ita vocanda Amphisphaeria aquatica Plöttner et Kirschst. (in Salicaceis). — Syll. XXII, 183.
- 9. Melanopsamma Waghornei House in N. Y. State Mus. Bull. 179 6346 [1914] p. 37 (1915). Ita vocanda M. borealis E. et E.—Syll. XI, 305 cum extet anterior M. borealis (Karst.) Sacc. Syll. I, 578.
- 10. Melanopsamma Merrillii H. S. Yates, Philippin. Journ. Sc. Manila 6347 XII (1917) p. 376. Peritheciis paucis, superficialibus, globosis, atris, carbonaceis, 200-500 μ diam., ostiolis papillatis; ascis cylindraceis, 120-130 × 8·10, 4-sporis, paraphysatis, paraphysibus filiformibus; sporidiis monostichis, ellipticis, ad medium 1-septatis et levissime constrictis, utrinque obtusis, hyalinis, 22-24 × 6·8.

Hab. in truncis indeterm. in silvis prov. Sangirin Alabat, Ins. Philipp.

11. Melanopsamma lichenoides Rehm, Ascom. Philippin. VIII, in Leafit. 6348 of Philipp. Bot. VIII, 1916, p. 2944. — Perithecia in ramulo corticato late fuscato vel dealbato laxe gregaria, ad basim innata, lenticularia, atra nitentia, glabra, poro umbiliculato pertusa, tenuiter carbonacea, 1 mm. diam.; asci clavati crasse tunicati, 60-70 × 10-12, 4-8 spori, J-; sporae oblongae, utrinque rotundatae medio septatae et constrictae quaque cellula 1-magniguttata, hyalinae, 20-24 × 10, 1-stichae. Paraphyses filiformes.

Hab. ad ramulos emortuos deciduos, Los Baños, Ins. Philipp. (C. F. BAKER). -- Mel. salicariae (Karst.) Sacc. affinis.

ERIOSPHAERIA Sacc. — Syll. I p. 597, IX p. 696, XI p. 307, XVI p. 490, XVII p. 659, XXII p. 164.

Eriosphaeria albido-mucosa Rehm, Ann. Mycol. XI, 1913, p. 150.— 6349
 Peritheciis gregariis, in ramulis emortuis, late albide mucosis ses-

silibus, globulosis, haud papillulatis, poro vix conspicuo pertusis, parenchymatice fuscidule contextis, pilis dispersis rectis, acutis, fuscis, 40-60 \* 3, undique obsessis, 0,1 mm. diam.; ascis subfusifor. mibus, clavatis, 40-45 > 6, octosporis; sporis fusoideis, rectis v. subcurvatis, utrinque acutatis, medio demum septatis ibique vix constrictis, utrinque guttulas 2 includentibus, hyalinis, distichis, 12-14 × 3; paraphysibus nullis.

Hab. ad ramulos Corni sanguineae (Cornaceae), prope Welka, Moraviae (Petrak). — Er. Scheremetieffianae P. Henn, proxima sed differt forma magnitudine sporarum.

- MELANOPSAMMELLA v. Höhnel, Ann. Mycol. 17., 1919, p. 121. --Perithecia supra levia infra tantum hyphis praedita, carbonaceorimosa, ostiolo depresse conoideo praedita; asci numerosi cylindracei octospori; paraphyses tenues filiformes rigidae; sporae hyalinae, biloculares, articuli saepe secedentes. — Status imperfectus Gonytrichum sistit.
- 1. Melanopsammella inaequalis (Grove) v. Höhnel, Eriosphaeria inae- 6350 qualis Grove, Syll. IX p. 697.
- OTTHIELLA Sacc. Syll. I p. 739, XVI p. 1135, XVII p. 662, XXII p. 167.
- 1. Otthiella Jacquemontiae Syd., Ann. Mycol, 14., 1916, p. 80. Pe. 6351 ritheciis in stromate subcarbonaceo atro parum evoluto dense caespitosis, ovato-globosis, 150-180 µ diam., atris, in sieco collapsis, minute papillatis, pariete ex cellulis polygoniis 10-12 µ diam. atrosubcoeruleis composito; ascis cylindraceo-clavatis, stipitatis, 50-65 \* 8-11, paraphysatis; sporidiis monostichis usque distichis, ellipsoideo-oblongis, medio 1-septatis, non constrictis, utrinque rotundatis vel parum attenuatis, 4 guttulatis, hyalinis vel subhyalinis (an tandem dilutissime brunneolis?),  $13-16 \times 4-5.5$ .

Hab. ad basim caulium et in superiore radicis parte Jaquemontia e evolvuloi dis (Convolvulaceae), Parimé, Rio Branco Brasiliae (E. Ule).

2. Otthiella cyathoidea Rehm, Ascomyc. Philipp. VI, Leaflets of Phi- 6352 lipp. Botany, VI (1914) p. 2259. - Stromate distincto nullo; peritheciis gregariis, interdum caespitosis, ad lignum vix fuscidulum sessilibus, peridermium perrumpentibus, piriformibus, nigris, non papillulatis, ostiolo minutissimo praeditis, scabriusculis, siccis umbilicatis, ad basim valde contractis, subrugulosis, 0,4 mm, diam.

crasse parenchymatice contextis; ascis ovatis, teneris, 25 \* 6-8, paraphysibus non conspicuis; sporidiis tristichis, oblongis vel subfusoideis, rectis, medio septatis, hyalinis, 6 \* 2.

Hab. in ramo deciduo emortuo, Los Baños, ins. Philipp. (E. SAB-LAN). — Propter formam mox cyathoideam, ascos ovales et minutiem sporarum hyalodidymarum vix Otthiellae species.

GIBBERA Fr. — Syll. I p. 599, IX p. 306, XIV p. 542, XVI p. 491, XVII p. 662, XXII p. 168.

1. Gibbera tinetoria Massee, Bull. Bot. Gard. Kew, 1911, p. 226. — 6353
Peritheciis epiphyllis, densissime aggregato-constipatis, crustam
atram superficiem foliorum obtegentem efficientibus, globosis, purpureo-atris, rugulosis, ostiolo papillulato donatis, 0,5 mm. diam.,
contextu minutissime parenchymatico, sordide purpureo; ascis cylindraceo-clavatis, apice crassiuscule tunicatis, basi attenuato-pedicellatis, 80 × 7-8; sporidiis oblique distichis, ellipsoideis, utrinque rotundato-truncatis, 1-septatis, dilutissime flavis, 11-12 × 5-6.

Hab. in foliis Monotis glabris (Dipterocarpaceae) in

Hab. in foliis Monotis glabris (Dipterocarpaceae), in Rhodesia, Afr. trop. (ALLEN).

2. Gibbera philippinensis Rehm, Ascom. Philippin. VIII, in Leafit. of 6354 Philippin. Bot. VIII 1916, p. 2946.— Perithecia in caespitulis sessilibus, 0,5-0,8 mm. latis, 2-4 arcte congregata, fere connata, globulosa, minutissime papillulata, glabra, nigra, 0,15 mm. lata, subcarbonacea, sicca umbilicata. Asci fusiformes, 65-70 × 15-18, 8-spori I-; sporae fusoideae, utrique acutatae, medio septatae et constrictae, utraque cellula 1 magniguttata, valde scrabriusculae, strato mucoso cinetae, nubiloso-hyalinae, 15-20 × 5-6, 2-dien transverse 1-stichae, paraphyses filiformes.

Hab. ad emortuum Schizostachyum (Graminaceae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

- CANTHAROSPHAERIA R. Thaxter, Bot. Gazette, 69., 1920, p. 3.— Perithecia superficialia, sparsa, subdimidiata, membranacea, ostiolata, ostiolo fasciculatim piligero. Asci octospori aparaphysati; sporidia hyalodidyma.
- 1. Cantharosphaeria chilensis R. Taxter, l. c. tab. I fig. 1-5.— Peritheciis subhemisphaericis mycelio brunneo ex hyphis ramosis crasse tunicatis efformato praeditis, nigro-brunneis rugulosis, 70-80 × 40-45 pilis circiter 12, confertis, irregularibus, simplicibus brunneis, 35 × 2,5-3; ascis brevibus obtusis, e basi abrupte angustata sporiferis,

apice obtusis,  $28 \times 10$ ; sporidiis hyalinis medio septato-constrictulis, loculo inferiori saepe parum angustiori, subdistichis,  $12-14 \times 4,5-5$ . Hab. ad superficiem Oucujidorum (Coleoptera), inter frustula vegetalia dejecta, Corral Chile, America austr.

- GRIPHOSPHAERIOMA v. Höhnel, Ber. deutsch. bot. Ges. XXXVI, 1918, p. 312.— Stroma diatrypeoideum, erumpens. Perithecia collo praedita; membrana ex hyphis perpendiculariter paralleleque dispositis efformata. Paraphyses elongatae, filiformes. Asci cilyndracei 8-spori. Sporidia monosticha, hyalina, elongata, transverse uniseptata. Typus gen.:
- 1. Griphosphaerioma Symphoricarpi (Rehm) v. Höhn., 1. c. Plowrightia 6356 Rehm, Asc. exs. 1974 quae dehest in Sylloge, non Plow. Symphoricarpi Ell. et Ev., Sylloge IX p. 1042.

## Sect. 5. Phaeodidymae

PHAEOSPHAERELLA Karst. - Syll. IX p. 723, XI p. 312, XVI p. 498, XVII p. 675, XXII p. 169.

1. Phaeosphaerella Aceris v. Höhn., Fragm. z. Mykol. 799, in Stzgsb. 6357 Akad. Wiss. Wien CXXII, 1, p. 285 (1913). — Peritheciis hypophyllis in maculis brunneis rotundatis, obscurius marginatis, 3-6 mm. latis laxe gregariis, usque ad 120 μ diam., brunneis, eximie cellulosis, ostiolo applanato 20 μ lato praeditis, hyphis copiosis, brunneis, brevi-cellularibus (cellulis 8-24 μ longis) 6-10 μ latis saepe subtorulosis et concrescentibus cinetis; ascis copiosis, cylindraceo-clavatis, aparaphysatis, sessilibus, 40-52 × 8; sporidiis octonis, oblique monostichis vel pro parte distichis, pallide olivaceo-viridibus, breviter clavatis, ad septum parum constrictis, 8-9 × 3,5-4, loculo superiore saepe paullo obscuriore, ovoideo, 5 μ longo, loculo inferiore breviter cylindraceo, rotundato, 3 μ circ. longo.

Hab. in foliis hibernatis dealbatis Aceris Pseudoplatani (Aceraceae), Sonntagsberg, Austria infer. (STRASSER).

2. Phaeosphaerella Eriodendri (Kuijper) Trav., Mycosphaerella E. Kuij 6358 per, Rec. Trav. botan. Neerl. XI (1914) p. 44. — Maculis pallide griseis margine e brunneo rufescente cinctis; peritheciis parenchymate immersis, 75-100 μ diam.; ascis oblongo-fusoideis, 60-75 × 10-12; sporidiis ellipsoideis, utrinque attenuatis, ad septum constrictis, 15-17 × 4-5, e lutescentibus brunneis.

Hab. in foliis Eriodendri anfractuosi (Bombacaceae), in Surinam.

3. Phaeosphaerella Trotterii Sacc., Notae Mycol. XX, Nuovo Giorn. 6359 bot. it. v. 23., 1916, p. 222. Trotter, Marcellia XV, 1916, p. 80, cum icon. - Peritheciis biogenis, erumpentibus, dense congregatis et maculas effusas nigricantes efformantibus, punctiformibus, globuloso-depressis, dein leviter umbilicatis, 90-110 µ diam., glabris, ostiolo subrotundo, 14-16 µ diam. pertusis; contextu minute celluloso, fuligineo; ascis crasse obovato-clavatis apice rotundatis, basi brevissime tenuato-stipitatis,  $45-50 \times 18-20$ , rarius  $50 \times 14-15$ , octosporis, paraphysibus nullis (nisi muco quodam) obvallatis; sporidiis in medio asco tristichis, tereti-oblongis, utrinque rotundatis, subrectis, constricto-1-septatis, 14-16 × 7-7,5, olivaceo fuligineis, intus farctis v. nubilosis.

Hab. ad excrescentias sive gallas (circ. 1 cm. latas) (entomogenas, vel mycocecidium?) ramulorum vivorum Cisti salvifolii (Cystaceae), in rupestribus, S. Giacomo di Lauro, Avellino, Italia merid. (A. TROTTER). - A ceteris generis speciebus bene distincta.

4. Phaeosphaerella Paspali L. R. Tehon, Bot. Gazette 67., 1919, p. 508, tab. XVIII fig. 5.—Peritheciis amphigenis, immersis, subsphaeroideis, 125-137 µ diam., ostiolo minuto 10-15 µ lato praeditis; ascis confertis subcylindraceis, 55-60 × 8, octosporis; sporidiis brunneis, oblongis v. fusoideis, inaequaliter uniseptatis, septo constrictulis 12.15 × 3.5; paraphysibus nullis.

Hab. in foliis Paspali glabri Poir. (Graminaceae), Maricao, Porto Rico.

5. Phaeosphaerella japonica Shirai et Hara, Bot. Magaz. Tokyo XXV 6361 (1911) p. 72, tab. 2 fig. 15-17. — Maculis initio tenuibus dein latioribus confluentibusque, ex obscure brunneis griseo-brunneis; peritheciis sparsis, immersis, globosis vel hemisphaericis, interdum ovoideis, ostiolo papillato praeditis, obscure brunneis, membranaceis, 70-90 µ diam.; ascis oblongis, clavatis vel cylindraceis, apice rotundatis, octosporis, aparaphysatis, 50-60 × 12-15; sporidiis distichis, fusiformibus vel ellipsoideis, 1-septatis, ad septum constrictis, initio hyalinis dein luteo-brunneis,  $7-8 \times 5-6$ .

Hab. in foliis Cercidis chinensis (Leguminosae), Prov. Mino, Gifu, in Japonia (K. HARA).

6. Phaeosphaerella Desmodii (Syd.) Sacc., Aphysa Desmodii Syd., Ann. 6362 Mycol. 15., 1917, p. 205. — Maculas epiphyllas atras 1-2,5 mm. latas e peritheciis numerosis punctiformibus compositas formans; pe-

ritheciis subcuticularibus dense gregariis, nitentibus, 60-100  $\mu$ latis, 35-50  $\mu$ altis, linea basali plana obscure brunnea ca. 5  $\mu$  crassa, pariete superiore convexo atro 5-6  $\mu$  crasso cuticula semper tecto parenchymatice e cellulis 5-6  $\mu$  diam. contexto, ostiolo 15-20  $\mu$ lato; asci subsessiles, aparaphysati, subclavati vel ventricoso-cylindracei, 40-50  $\times$  13-16, octospori ; sporae distichae, oblongo-ellipsoideae, medio septatae, non constrictae, utrinque rotundatae, olivaceo-brunneae, 11-12  $\times$  5.

Hab. in foliis Desmodii sinuosi (Leguminosae), Panai, Benguet, Luzon, Ins. Philipp. (MARY STRONG CLEMENS).

7. Phaeosphaerella Theae Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 6363 P. III, 1917, p. 224.— Peritheciis immersis, epiphyllis, nigris, minutis, 80-100  $\mu$  diam.; ascis paucis, clavatis, octosporis,  $50 \times 12$ ; sporis fusoideis, uniseptatis, loculo superiore majore, apice rotundato, inferiori sub-oblongo, apice obtuso,  $9-14 \times 4-5$ .

Hab. in foliis Theae (Theaceae), Peradeniya, Ceylon.

- BOLOSPHAERA Syd., Ann. Mycol. 15., 1917, p. 201.— Mycelium tenue in aliis fungis parasiticum, ramosum vel anastomosans; perithecia superficialia, minuta, subglobosa, ostiolo plano praedita, glabra, levia, contextu minute grumoso vel globuloso; asci tenues oblongi vel clavulati, aparaphysati, octospori; sporae bicellulares, in maturitate coloratae.
- 1. Bolosphaera subferruginea Syd., l. c.— Hyphae in mycelio Meliolae 6364 spec. parasiticae, tenues flavidulae vel fuscidulae, 2·3 μ crassae; perithecia subglobosa, 110·140 μ diam., levia, glabra, contextu subferrugineo, irregulariter granuloso, ostiolo plano praedita, asci oblongi vel clavulati, sessiles vel subsessiles, 30·36 × 10·12, octospori, aparaphysati; sporae oblique monostichae usque distichae, oblongae vel oblongo-clavulatae, utrinque rotundatae vel basim versus leniter attenuatae, medio vel circa medium septatae, non constrictae, 10·12 × 2·3, diu hyalinae, tandem flavidae vel flavo-fuscidulae.

Hab. parasitica in mycelio Meliolae ad folia Tabernaem ontanae Pandacaquii (Apocynaceae), pr. Bataan, Ins. Philipp. (M. RAMOS).

2. Bolosphaera degenerans (Syd.) Syd., Ann. Mycol. 15., 1917, p. 201, 6365 ? Dimerium degenerans Syd., Ann. Mycol. 11., 1913, p. 403.— Mycelio in alio fungo (Meliolae spec.?) parasitico ejusque hyphas arctissime ambiente et rete densissimum formante, ex hyphis olivaceofuscidulis saepissime anastomosantibus 1,5-2,5 μ crassis non vel

parce septatis composito; peritheciis globosis, gregariis, atris, ostiolo plano praeditis, glabris, 70-100  $\mu$  diam., contextu peculiari haud parenchymatico sed ex particulis minutissimis composito; ascis plerumque saccatis, apice incrassatis et obtusis, sessilibus, 40-50  $\times$  15-18, octosporis, aparaphysatis; sporidiis 3-4-stichis, oblongo-clavatis, medio 1-septatis et non constrictis, utrinque obtusis, ex hyalino olivaceo-fuscis, 16-20  $\times$  3,5-4, cellula superiore saepe latiore.

Hab. in mycelio alicujus fungi, ad folia Sersalisiae usambarensis (Sapotaceae), parasiticum, Amani, Africa trop. or. (GROTE).

- TICHOTHECIUM Flotow. Syll. 1X p. 723, XIV p. 551, XVI p. 498, XVII p. 676, XXII p. 170.
- Tichothecium grossum Körb., Parerga Lich. p. 469 (Discothecium); 6366
   Vouaux, Bull. Soc. Mycol. Fr., 1913 p. 59. Peritheciis sparsis, magnis, 1-2 mm. crassis, verruciformibus demum irregulariter tuberculiformibus, ostiolo umbilicato praeditis; ascis breviter clavatis, 6-8-sporis, sed plerumque 6-sporis; sporidiis parvis, soleaeformibus, brunneis, 2-3 latitudinem superantibus.

Hab. in thallo Gyrophorae arcticae (Lichenes), in Germania — Ubi sporidia continua a typo generis recedit.

2. Tichothecium pygmaeum Körb. — Syll. IX p. 726. — Var. Fusco-atrae 6367 (Steiner) Vouaux, Bull. Soc. Mycol. Fr. 1913, p. 64., Tichothecium Fusco-atrae Steiner, Beitr. Lich. Fl. Griech. p. 161. — Peritheciis ostiolo parvo praeditis, usque ad 150 μ latis; ascis regulariter clavatis, raro ellipsoideis, 24 sporis; paraphysibus nullis; sporidiis, late ellipsoideis, utrinque rotundatis, raro magis elongatis, demum brunneo-obscuris et constrictis, uniseptatis, 9-11 × 4,8-6,6.

Hab. in thallo Lecideae fumosae var. fusco-atrae (Lichenes), in Penthelico prope Athenas, Grecia (STEINER).

- DIDYMOSPHAERIA Fuck.— Syll. I p. 701, IX p. 728, XI p. 312, XIV p. 551, XVI p. 498, XVII p. 676, XXII p. 170.
- Didymosphaeria macrosporella (v. Höhn.), Massariopsis macrosporella 6368
   v. Höhnel, Ber. deutsch. bot. Ges. Wien, XXXV, 1917, p. 248 (nomen nudum).— A M. acerina sporidiis multo majoribus diversa (cnfr. Fragmente z. Mykol. 1035, in Sitzb. k. Ak. d. Wiss. Wien 1917).
   Hab. in Acere (Aceraceae), Europa, loco?
- Didymosphaeria fucicola Sutherl., New Phytologist, XIV, 1915, p. 6369
   188. Mycelium diffusum; perithecia simplicia, sparsa, 120-140 μ

diam., globosa v. pyriformia, contextu membranaceo, immersa, ostiolo brevissimo pseudo-clypeum atrum perfrigente; asci copiosi, 70-90 × 10-14, cylindracei vel clavati, octospori; paraphyses filiformes vel apicibus incrassatae; sporidia ovoidea, 16-22 × 7-8, 1-septata, primo hyalina demum flavescentia, constricta.

Hab. in thallo vivo Fuci vesiculosi (Algae), Orkney, Britannia.

3. Didymosphaeria pelvetiana Sutherl., New Phytologist v. XIV, 1915, 6370 p. 185, fig. 2. - Mycelium diffusum, perithecia simplicia, sparsa, minuta, circa 90-115 µ diam., globosa, membranacea, tota immersa, ostiolo brevissimo, pseudo-clypeo perfringente; asci crebi cylindracei vel apicibus attenuati, 55-75 \* 9-11, parietibus tenuibus, octospori; paraphyses filiformes v. raro in duos tres ramos divisae; sporidia disticha, fusiformia, 18-24 × 5-6, 1-septata, primo hyalina, demum flavescentia, leviter constricta.

Hab. in thallo vivo Pelvetiae canaliculatae (Algae), Orkney and Solent, Britannia.

4. Didymosphaeria Blumeae Rehm, Ascomyc. Philipp. IV, Leaflets of 6371 Philipp. Botany, VI (1913) p. 1939. - Peritheciis cortici late fuscato innatis eumque protuberantibus, interdum prorumpentibus, globulosis, nigris, minutissime papilfulatis, poro perspicuo pertusis, glabris, 250 µ diam., membranaceo-contextis; ascis evanidis; sporidiis fusoideis, rectis, medio septatis constrictisque, utraque cellula magniguttata, fuscis, 15 × 6.

Hab. ad Blumeam balsamiferam (Compositae), emortuam, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

5. Didymosphaeria decolorans Rehm — Syll. XIV p. 553. — Var. ame- 6372 ricana Sacc., Notae Mycol. XXII (R. Acc. Pad. 1917 p. 165). - Dignoscitur maculis in cortice albido-griseis, nec flavo-fuscis; ascis longioribus et angustioribus, 75-80 > 5, copiose filiformi-paraphysatis; sporidiis monostichis ellipsoideis, 9-10 × 4-4,5 constricto 1-septatis, fuligineis.

Hab. in ramis corticatis Corni stoloniferae (Cornaceae), Whitestone gully, Amer. bor. (Brenckle). — Nutat ad gen. Amphisphaeriam sed perithecia diu epidermide tenui rimosaque velata.

6. Didymosphaeria spilogena Sacc., Nuovo Giorn. Bot. it. N. S. v. XXII, 6373 1915, p. 36. — Maculis sparsis, e rotundo angulosis, 3-6 mm. diam., interdum confluentibus, ex alutaceo albidis, non v. tenuissime atromarginatis; peritheciis epiphyllis, sparsis, globoso-lenticularibus, initio velatis, 250-300 \mu diam., poro pertusis, contextu denso, atro-

fuligineo; ascis tereti-fusoideis, paraphysatis (immaturis visis); sporidiis (ex ascis jam resorptis) oblongis, utrinque rotundatis, 1-septatis, constrictulis,  $9\text{-}10 \approx 4,7\text{-}5$ , rectis, olivaceo-fuligineis.

Hab. in foliis adhuc viventibus sed marmoratis. Quercus Ilicis (Fagaceae), Fossi di Valletta, Addolorata, in Ins. Melita.—Peritheciis exquisite maculicolis etc., videtur species distincta.

7. Didymosphaeria moravica Rehm, Ann. Mycol. XI, 1913, p. 151. — 6374 Peritheciis gregariis, sub epidermide dealbatis, demum elevata nidulantibus eamque papillula minima perforantibus, globulosis, nigricantibus, 0,2 mm. diam., parenchymatice cinereo-fuscidule contextis; ascis cylindraceis, apice rotundatis, vix stipitatis, 8-sporis, -130 × 10·12; sporis oblongis v. oblongo-clavatis, utrinque rotundatis, medio septatis et constrictis, primitus hyalinis, guttulis oleosis repletis, demum subfuscis, utraque cellula 1-guttata, strato mucoso non obvolutis, 12·17 × 8·9, monostichis. J ope episporium valde coerulee tinctum. Paraphysibus filiformibus, 3-4 μ lat.

Hab. in ramulo Quercus Roboris (Fagaceae), prope Podhow, Moraviae (PETRAK). — Did. sociali Sacc. proxima.

8. Didymosphaeria Eutypae M. Sureya, Bull. Soc. Mycol. de Fr. 1911, 6375 p. 220, fig. 1-2. — Peritheciis globulosis, brunneis, in loculis vetustis stromatorum Eutypae latae nascentibus, 169-200  $\mu$ ; ascis paraphysatis, cylindraceo-clavatis, basim attenuatis, 8-sporis,  $70 \times 9$ ; sporidiis late ovoideis vel fere rotundatis, brunneis, medio 1-septatis, non constrictis,  $8 \times 7,5$ -8.

Hab. in ramo emortuo Quereus (Fagaceae), in stromatibus vetustis Eutypae latae, in silva Fontainebleau, Gallia.

9. Didymosphaeria infossa Sacc., Philipp. Journ. of Sc. Manila P. I, 6376 1921, p. 597. — Peritheciis gregariis strato ligneo profunde immersis, globolusis 0,3-0,5 mm. diam. et collo elongato, cylindrico matricis superficiem attingentibus, nigris, contextu minute celluloso, fuligineis; ascis cylindraceis, brevissime stipitatis, apice rotundatis, 190-200 × 12, 8-sporis, obsolete paraphysatis; sporidiis monostichis, fusoideis, utrinque acutatis, rectis v. inaequilateris, 1-septatis, non constrictis, 28 × 8; eximie longitrorsum striatis, olivaceis v. fusco-olivaceis.

Hab. in culmis emortuis Bambusae vulgaris (Graminaceae), Kwang Tung, Canton, Cina (Reinking).— A ceteris speciebus bambusicolis rite dignoscenda; cum Anthostomella profunda Sacc. situ peritheciorum mire convenit, etsi diversissima.

10. Didymosphaeria striatospora Sydow, Annales Mycol. XI, 1913, 6377

p. 260.— Peritheciis solitariis v. binis consociatis, innatis, epidermide conspicue et nitide atrata tectis, maculas atras 0.5-2.5 mm. longas efficientibus, globulosis, 0.12-0.2 mm. latis, ostiolo papilliformi; ascis cylindraceis, apice obtusis, sessilibus,  $110-140 \times 11-14$ , octosporis; paraphysibus non visis; sporidiis monostichis, oblongoellipsoideis v. oblongis, utrinque obtusis, medio 1-septatis et constrictis, brunneis, quoque cellula saepe grosse 2-guttata, distinctissime striatis,  $20-25 \times 6.5-8$ .

Hab. in vaginis caulibusque Miscanthi sinensis (Graminaceae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

11. Didymosphaeria anisomera Sacc., Notae Myc. XX, in Nuovo Giorn. 6378 bot. it. 23., 1916, p. 202.— Areis oblongis, minutis, expallentibus praecipue epiphyllis, cum maculis majoribus atropurpureis non fungiferis commixtis; peritheciis gregariis innatis, non erumpentibus globosis, leniter depressis, poro 12·14 μ lato pertusis, circ. 100 μ diam.; contextu laxe celluloso, dilute fuligineo; ascis cylindraceis, 8-sporis, apice subrotundatis, basi tenuatis, subsessilibus, 55-65 × 11-11,5, paraphysibus parum distinctis; sporidiis distichis v. oblique monostichis, tereti-oblongis, utrinque rotundatis, 1-septatis, leviter constrictis, 14-17 × 4-5, olivaceo-rufulis, loculo superiore fere duplo longiore et ob plasma bipartitum spurie 1-septato.

Hab. in foliis languidis v. emortuis Sorghi vulgaris (Graminaceae), Los Baños, Ins. Philipp. — Notis macularum et sporidiorum facile distincta species.

12. Didymosphaeria Linderae Sacc., Ann. Mycol. XII, 1914, p. 297.— 6378 Peritheciis late et dense gregariis, subcutaneo-erumpentibus, globosis, 250-450 μ diam. nigris, nucleo albo dein atro farctis, ostiolo obtuso brevissimo; ascis tereti-clavatis, brevissime obtuse stipitatis, apice rotundatis, 130-160 × 16-20, octosporis, paraphysibus diffluentibus; sporidiis distichis v. oblique monostichis, ellipsoideis, utrinque rotundatis, medio septatis, vix constrictis, 20-25 × 10-12, levibus, fuligineis, eguttatis,

Hab. in ramis emortuis Linderae Benzoin (Lauraceae), London Ont., Amer. bor. (J. Dearness).— Lignum peritheciis subjacens fuscescit v. nigrescit. Affinis Did. Rhamici Fabr., qua omnibus partibus minor; an varietas?

13. Didymosphaeria Stowardi Sace., Ann. Mycol. XIII., 1915 p. 138. — 638 Peritheciis amphigenis, laxe gregariis, epidermide velatis, globosodepressis, 250-300 μ diam. nigris obtuse et brevissime papillatis, contextu irregulariter celluloso, crassiusculo, olivaceo-fuligineo;

ascis cylindraceis, apice rotundatis, brevissime sensim pedicellatis,  $95\cdot120 \times 14$ , copiose filiformi-paraphysatis, 8-sporis; sporidiis recte v. oblique monostichis, oblongo-ellipsoideis, utrinque rotundatis, rectis,  $17\cdot18 \times 7,5\cdot8$ , badio-fulvis, grosse 2-guttulatis, medio 1-septatis, leniterque constrictis, tunica crassiuscula.

Hab. in foliis emortuis Daviesiae multiflorae (Leguminosae), Australia (STOWARD).

14. Didymosphaeria Prosopidis Bubàh, Ann. Naturh. Hofmus. Wien 6381 XXVIII (1914) p. 198. — Peritheciis dense gregariis, subepidermicis, globosis, 120-150 μ diam., demum seminudis, nigris, crassis, apice conico, contextu distincte pseudoparenchymatico, extus nigro intus flavido; ascis oblongo-clavatis, crasse tunicatis, praecipue ad apicem, brevissime pedicellatis, paraphysatis, octosporis, 50-75 × 18-20; sporulis 3-rarius 2-stichis, ellipsoideis, 19-23 × 7.5-9,5, flavidis vel flavo-brunneis, apice attenuato-rotundatis, uniseptatis, leniter constrictis, loculo superiore majore.

Hab. in ramis emortuis Prosopidis Stephanianae (Leguminosae), prope El Hammam, ad confines Mesopotamiae et Arabiae orientalis.

15. Didymosphaeria insularis Sacc., Nuovo Giorn. Bot. it. N. S. v. XXII, 6382 1915, p. 37.— Peritheciis gregariis initio subcutaneis et epidermide atrata nitida tectis, depresse globosis, obtusis, 300  $\mu$  diam., ostiolo parum manifesto, nigris; ascis cylindricis, apice rotundatis, breviter crassiuscule stipitatis, filiformi-paraphysatis, 60-65  $\approx$  6, octosporis; sporidiis oblique monostichis, oblongo ellipsoideis, rotundatis v. acutulis,  $10 \approx 4.7$ -5, constricto-1-septatis, fuligineo-olivaceis.

Hab. in caulibus emortuis Asphodeli ramosi (Liliaceae), frequens, in Insula Melita.

16. Didymosphaeria Bryonthae (Arnold) Wint. — Syll. IX p. 738. — 6383 Var. Stellulatae Vouaux, Bull. Soc. Mycol. Fr. 1913, p. 111. — Peritheciis sparsis sed numerosis, immersis globoso-depressis, 110-150  $\mu$  diam.; contextu brunneo, crasso, e cellulis supra polygoniis lateraliter elongatis, 3-5  $\mu$  cr. efformato; ascis stricte clavatis, tenuiter tunicatis, apice crassioribus, late breviterque pedicellatis, octosporis, apice rotundatis, 62-65  $\approx$  10,5-12; paraphysibus disjunctis, numerosis, filiformibus ramosissimis et quandoque anastomosantibus, parum septatis, ascos longioribus, 1  $\mu$  cr.; sporidis supra distichis infra monostichis, ellipsoideo-oblongis, utrinque late rotundatis, localo inferiori pleramque angustiori, primum olivaceis dein brunneis, medio 1-septato-constrictulis, 10-15  $\approx$  5-6.

Hab. in thallo Buelliae stellulatae, Colombières Herault (A. DE CROZALS), Urceolariae actinostomae, in ins. Hawai (Abbe FAURIE), Rhinodinae exiguae (Lichenes), prope Dunkerque (D. BOULY DE LESDAIN).

17. Didymosphaeria microstictica (Leight.) Wint. — Syll. IX p. 738.— 68 Var. Albo-atrae Vouaux, Bull. Soc. Mycol. Fr. 1913, p. 112.— Peritheciis laxe gregariis, sphaeroideis et supra parum depressis, 140-200  $\mu$  lat.; contextu e cellulis 4-5  $\mu$  cr.; ascis clavatis, octosporis,  $64-80 \times 14-17$ ; sporidiis distichis  $13,5-17 \times 5,5-8$ .

Hab. in thallo Diplotommae alboatrae (Lichenes), St. Laurens Herault, Gallia (A. DE CROZALS).

18. Didymosphaeria Kerneri (Steiner) Vouaux, Bull. Soc. Mycol. Fr. 638 1913, p. 108, Polycoccum Kerneri Steiner, Beitr. z. Lichenfl. Griech. u. Eg. p. 162.— Peritheciis congregatis, emergentibus, demum hemisphaericis, ostiolo minuto praeditis, nigris, 200-300 μ diam.; ascis primum fusoideis, dein cylindraceis, octosporis; paraphysibus filiformibus septatis, ramosis, 3-4 cr.; sporidiis late ovoideis, utrinque rotundatis, primum hyalinis, dein obscure-brunneis, 1-septatis, halone circumdatis, 11-14 × 8-9, quandoque transverse monostichis.

Hab. in thallo Leciade ae fumosae var. fusco-atrae (Lichenes), in Penthelico, Grecia (STEINER).

19. Didymosphaeria maculans Vouaux in Pitard et Harm., Bull. Soc. 638 Bot. Fr. LVIII (1911), Mem. 22 p. 71. - Vouaux, Bull. Soc. Myc. de Fr., 1913, p. 109. - Mycelio maculas nigras in superficie ramulorum vel etiam apotheciorum usque 3 mm. latas sistente; hyphis plerumque in longitudinem dispositis, ramis lateralibus anastomosantibusque copiosis praeditis, sinuosulis, 2-4,5 µ cr., cellulis 3-10 µ longis, circa perithecia radiantibus, interdum gemmas fuscas sphaericas vel late ovales 2,5-6 µ longas, solitarias vel catenulatas producentibus; peritheciis in maculis gregatim dispositis, immersoprominulis, subsphaericis, 100-160 µ diam., ostiolo simplici pertusis, nigris, contextu crasso, sub microscopio fusco, pseudoparenchymatico, cellulis polyedris 3.4 µ latis; ascis clavatis, crasse stipitatis, apice tunica incrassata; sporidiis plerumque 4, rarius 5-6, rarissime 8, mono-vel distichis, 12,5-16 \* 5,5-6,5; paraphysibus sat copiosis, irregularibus, ramosis, interdum anastomosantibus, parce septatis, guttulatis, 1,5.2 µ cr., ascorum longitudinem parum superantibus.

Hab. in thallo Ramalinae subgeniculatae (Lichenes), Ladera de Guïmar, Teneriffa, alt. 900 m. (PITARD).

20. Didymosphaeria epicrassa (Oliv.) Vouaux, Bull. Soc. Mycol. Fr. 6387 1913, p. 108, Buellia epicrassa Oliv., Par. Lichen. Fr. p. 29.— Peritheciis arcte gregariis maculis circularibus nigris efformantibus, 0,6-1,2 mm. diam., nonnullis quandoque centro tuberculiformi concrescentibus et aliis circinnantibus, nigris, immersis, subsphaeroideis 85-150  $\mu$  diam.; contextu supra obscure brunneo, infra pallidiore, pseudoparenehymatico e cellulis polygoniis 3-4,5  $\mu$  cr. efformato; ascis cylindraceis breviter crasseque pedicellatis, crasse tunicatis, octosporis, 58-78  $\times$  12-16,5; paraphysibus distinctis, numerosis, filiformibus, parum septatis, ramosis, quandoque anastomosantibus, 1,5  $\mu$  cr.; sporidis brunneis, distichis, 1-septato-constrictulis, ovoideo-oblongis, utrinque late rotundatis, infra parum angustioribus, 15-21  $\times$  6-8.

Hab. in thallo Squamariae crassae (Lichenes), Tarn (E. Sudre), Brézines, Mons, Hérault (A. DE CROZALS), Gallia.

21. Didymosphaeria wandelensis P. Har. in Hue, Lichens, Exped. arctique Française (1903-1905), 1908, p.8 (*Endococcum*). — Peritheciis immersis, minutissimis,  $120 \times 100$ , coriacellis, ovato-globosis, poro simplici pertusis, pariete e contextu minute parenchymatico efformato, apicem versus (25  $\mu$  circiter) incrassato et obscuriori, deorsum 8  $\mu$  crasso fuligineo-pellucido; contextu albido; ascis sat numerosis, cylindraceis, indistincte paraphysatis,  $70 \times 6$ ; sporis octonis, monostichis, inaequaliter transverse uniseptatis constrictisque, obscure fuscis,  $12\text{-}14 \times 4\text{-}6$ .

Hab. in apotheciis Lethariae Wandelensis (Lichenes), Insula Booth-Wandel, Antareticae (Exped. gallica Charcot 1903-1905).

22. Didymosphaeria Borgii Caruana-Gatto et Sacc., Nuovo Giorn. bot. 6389 it. N. S. v. XXII, 1915, p. 37.— Peritheciis densiuscule gregariis subcutaneo-erumpentibus, prominulis, globosis, breve papillatis, 300-380 μ diam., nigris, contextu irregulariter celluloso, fuligineo; ascis cylindricis apice rotundatis, breviter angustato-stipitatis, 80-90 · 7-8, copiose filiformi-paraphysatis, octosporis; sporidiis oblique monostichis, utrinque acutulis, ellipsoideis, medio 1-septatis non constrictis, rectis, 10-12 × 4,8-6, fulvo-fuligineis.

 $\it Hab.$  in ramulis emortuis Rosae sempervirentis (Rosaceae), Boschetto, in Ins. Melita (G. Borg). — Var. Meliae Sacc. l. c. p. 37. — Peritheciis paullo minoribus 180-200  $\mu$  diam. durioribus; ascis jam resorptis; sporidiis  $11,5-12 \times 4,7$ , fuligineis.  $\it Hab.$  in ramulis fructiferis Meliae Azedarach (Meliaceae), Addolorata, Ins. Melita.

23. Didymosphaeria eucalyptina Sacc., Nuovo Giorn. Bot. it. N. S. v. 6390 XXII, 1915, p. 36. - Peritheciis plerumque epiphyllis, laxe gregariis, non maculicolis, globoso-lenticularibus, initio velatis, 300 µ diam., poro pertusis, nigricantibus; ascis cylindraceis, apice rotundatis, brevissime crasse stipitatis, 60-70 × 7-7,5, paraphysibus filiformibus obvallatis, octosporis; sporidiis oblique monostichis, oblongo-ellipsoideis 9,5-10 × 4,7-5, atro-fuligineis, medio 1-septatis, leviter constrictis, rectis.

Hab. in foliis morientibus Eucalypti gummiferae vel E. Globuli (Myrtaceae), Addolorata, in Insula Melita .-Affinis D. epidermidis, a qua differt, praeter locum, peritheciis non collabescentibus, gregariis, non sparsis, sporidiis paullo angustioribus.

24. Didymosphaeria minutelloides Rehm, Ascomyc. Philipp. I in Phi- 6391 lipp. Journ. of Sci. VIII (1913) p. 186 .- Peritheciis gregariis, cortici interiori late denigrato insidentibus, demum per epidermidem haud decoloratam prorumpentibus, globulosis, glabris, minutissime papillulatis, nigro-fuscis, parenchymatice crasse contextis, ca. 150 µ latis; ascis clavatis, apice rotundatis, teneris, 45-50 × 7, octosporis, filiformi-paraphysatis; sporidiis distichis, clavatis, medio septatis et subconstrictis, cellula superiore latiore, inferne angustata, fuseis,  $7.8 \times 2.5$ .

Hab. in petiolis emortuis Arengae (Palmae), Luzon, Prov. Laguna, Los Baños ins. Philipp. (C. F. BAKER). - Affinis D. minutellae Penz. et Sacc. sed sporidiis clavatis, inferne subacutatis, ad septum constrictis et loculis facile separabilibus.

25. Didymosphaeria Housei Dearness, Mycologia 8., 1916, p. 100. - Pe- 6392 ritheciis sparsis, nigro-brunneis, epidermidem pustulatim elevantibus, 0,3 mm. diam.; ostiolis brevissimis, interdum obsoletis; ascis cylindraceis, breviter stipitatis, 65-72 × 5-6, paraphysatis; sporidiis constricto-1-septatis fumose brunneis, arcte 1-septatis, 8-9 × 4-4,5.

Hab. in ramis emortuis Ceanothi americani (Rhamnaceae), Albany, N. Y., Am. bor. (H. D. House). - A Did. Ceanothi sporidiis multo minoribus differt.

26. Didymosphaeria fructicola Naoumoff, Bull. Soc. Oural. Amis Sc. Nat. 6393 XXXV (1915) p. 20 extr., tab. 1 fig. 2. - Peritheciis fere globosis, immersis, ostiolo erumpentibus, 175 µ lat. 160 altis; ascis cylindraceis, paraphysatis, p. sp. 82 \* 11; sporidiis oblique monostichis, ellipsoideis, medio constrictis, hyalinis, 13,8 × 8,3, loculo superiore vix crassiore.

Hab. in fructibus Veronicae Chamaedryos (Scrophulariaceae), Gub. Perm in Rossia. — Sporidiis hyalinis?

27. Didymosphaeria leptitana Trotter, Nuovo Giorn. bot. it. 1916, p. 6394 14, cum icon.— Peritheciis gregariis, primum subcutaneis dein insidentibus, nigris, minutis, globoso-conoideis, 90-120 μ diam., contextu minute parenchymatico pallide fuligineo, ostiolo 20-30 μ lato; ascis subclavatis v. subellipsoideo-clavatis, basi breviter attenuato-stipitatis, 40-50 μ long., medio 15-17 μ latis, octosporis, juventute tunica plerumque ad apicem crassiore; paraphysibus non visis verisimiliter evanidis collabescentibus; sporidiis distichis, elongato-ellipsoideis v. cylindraceo-subfusoideis, rectis v. leniter curvulis, medio septo distincto praeditis, loculis subaequilongis, extus strato mucoso tenui indutis, 13-16 × 3,5-4 v. 12-14 × 3,5, primum subhyalinis dein pallide flavo-brunneis.

Hab. in foliis ramulisque languidis Reaumuriae vermiculatae L. (Tamaricaceae), Uadi Ngasa prope Homs (in ditione leptitana), Tripolitaniae (TROTTER).

28. Didymosphaeria petrakiana Sacc., Ann. Mycol. XII, 1914, p. 286.—6305 Peritheciis phyllogenis, amphigenis, punctiformibus, globoso conoideis, nigris, subcutaneo-erumpentibus, 100-150 μ diam., vix papillatis; ascis tereti-clavatis, brevissime stipitatis, apice rotundatis, 60-70 × 7,5-9,5, paraphysibus filiformibus (genuinis?) obvallatis, octosporis; sporidiis distichis v. oblique monostichis, oblongo-biconoideis, constricto-1-septatis, 14-15 × 4,5-6, intense olivaceis, loculo sup. lenissime crassiore, inferiore paullo acutiore.

Hab. in foliis omnino corruptis Tiliae (Tiliaceae), M. Weisskirchen, pr. Teplitz, Germania (F. Petrak). — Affinis Did. phyllogenae Wint. a qua, praeter patriam, differt paraphysibus potius spuriis, non septatis etc.

29. Didymosphaeria caespitulosa Sacc., Ann. Mycol. XIII (1915), p. 127. — 6396 Peritheciis subcutaneo-erumpentibus, plerumque hinc inde in caespitulos minutos aggregatis, nigris, globulosis, breviter acutiuscule papillatis, 150-180 μ diam., contextu dense celluloso, atrofuligineo; ascis tereti-clavulatis, breviter sensim pedicellatis, apice rotundatis, copiose filiformi-paraphysatis, 50-55 × 9-10, octosporis; sporidis distichis, elliptico — v. ovato-oblongis, utrinque obtusulis, medio constricto-1-septatis, fulvo-fuligineis, 12-13 × 5-5,5, loculo infero saepe tenuissime angustiore.

Hab. in ramis emortuis Premnae Cumingianae (Verbenaceae), Los Baños, Ins. Philipp. (BAKER).

30. Didymosphaeria inconspicua Rehm, Ascom. Philippin. VIII, in 6391 Leaflt, of Philippin. Bot. VIII, 1916 p. 2948.— Perithecia gregaria, cortici dealbato innata, globulosa, glabra, fuscidula, ostiolo minutissimo vix conspicuo prominente, membranacea; asci cylindracei apice rotundati, 8-spori, 100 & 8, J-; sporae ellipsoideae, medio septatae et valde constrictae, utrinque subattenuatae, rectae, utraque cellula 1-magniguttata, fuscidulae, 12-14 > 5, 1-stichae. Paraphyses nullae.

Hab. ad ramum emortuum Premnae odoratae (Verbenaceae), Los Baños, Ins. Philipp. (C. F. BAKER). - Peritheciis membranaceis, plane absconditis et defectu paraphysium notabilis. Phaeo. sphaerellae? donacinae Speg. proxima videtur. Utraque ad Phaeodidymellam Rehm trahendae.

31. Didymosphaeria tetraspora Massee, Bull. Bot. Garden Kew, 1907 6398 p. 124. - Peritheciis sessilibus, erumpentibus, dense gregariis, convexis, glabris, circa ostiolum depressis, ostiolo subprominente, nigris, 0,5 mm. latis; ascis cylindraceis, basi sensim attenuatis, apice obtusis, jodio haud tinctis, 100 > 20-22, tetrasporis; sporidiis fusoideis, 1-septatis, brunneis, 32-35 \* 8-10; paraphysibus filiformibus, ascis longioribus, aequalibus.

Hab. in ramis dejectis, Sarawak, Borneo.

STEGASTROMA Syd., Ann. Mycol. 14., 1916, p. 81 (Etym. a stege clypeus). - Perithecia immersa, pariete tenui molli, superne clypeo firmo matricem occupante et nigrificante connexa. Ostiolum cylindraceum, obtusum, clypeum perforans. Asci paraphysati, octospori. Sporidia brunnea, elliptica, 1-septata, cellula basali minutissima pallidiore.

1. Stegastroma Theissenii Syd., l. c. - Stromatibus epiphyllis, orbicu 6399 laribus applanato-hemisphaericis 0,5 mm. diam., atris vel atro-brunneis, levibus parum nitidulis, vertice papillatis, tandem late pertusis, peritheciis singulis in quoque stromate, in superiore parte contextus matricis evolutis depresse globosis, 300-350 µ latis, 140-160 µ altis, ad latera et basim hyphis paucis cinctis, fere sine ullo pariete; clypeo atro, 40-60 μ crasso; ostiolo 80 μ lato, ca. 130 μ alto elypeum perforante; periphysibus numerosis evolutis; ascis stipitatis, cylindraceis, octosporis, p. sp. 70-75 × 8-9 (cum sporidiis monostichis) vel 50-55 × 9-11 (cum sporidiis distichis); paraphysibus filiformibus; sporidiis ellipsoideis, griseo-brunneis usque fusco-brunneis, utrinque rotundatis, inferne parum ovato-attenua-

tis, 12-14 \sim 5.5. ad basim septatis, cellula basali plerumque leniter pallidiore et vix 2 µ metiente.

Hab. in foliis Pithecolobii sp. (Leguminosae), Seringal, S. Francisco Rio Acre, Brasiliae (E. ULE).

- STEGASPHAERIA Syd., Ann. Mycol. 14., 1916, p. 362 (Etym. a stege clypeus). - Stromata epiphylla phyllachoroidea, atra, clypeum atypicum epidermale vel subepidermale formantia. Perithecia singula in quoque stromate, mesophyllum occupantia, pariete proprio fibroso-celluloso pallidiore praedita, collo distincto per epidermidem hypophyllam prorumpente praedita. Asci clavati vel cylindracei, paraphysati. Sporidia phaeodidyma. - A subgen. Microthelia generis Didymosphaeriae vix distinctum.
- Stegasphaeria pavonina Sydow, I. c. Maculis distinctissimis, cir- 6400 cinatim in annulos permagnos 2-20 cm. latos dispositis, amphigenis, in hypophyllo fumosis, in epiphyllo flavis vel flavo-brunneolis mox arescendo albidis vel griseolis, stromatibus epiphyllis pluribus plus minus dense aggregatis, minutissimis, punctiformibus, atris, nitentibus, clypeum atypicum formantibus; peritheciis plerumque singulis, totum mesophyllum occupantibus, 250-350 µ latis, 200-300 \mu altis, applanato-globosis, pariete flavo-brunneolo, proprio, e pluribus stratis hypharum angustarum composito, collo vel ostiolo crasso per epidermidem hypophyllam elevatam erumpente praeditis; ascis plerumque cylindraceis, apice incrassatis et rotundatis, basi breviter stipitatis, paraphysatis, 150-180 \* 16-22, 4-8sporis; sporidiis monostichis, late ellipsoideis, medio septatis et constrictis, primo flavidis vel flavo-brunneis, mox atro-brunneis et opacis, utrinque late rotundatis, superficie asperulis, 20-26 × 10-14.

Hab. in foliis Macarangae sp. (Euphorbiaceae), M. Maquiling, ins. Philipp. (C. F. BAKER).

ASTROSPHAERIELLA Sydow, Annales Mycolog. XI, 1913, p. 260 (Etym. ab Astrosphaeria, cui affine genus). - Perithecia primitus innata et papilla tantum per epidermidem prorumpentia, subcarbonacea, mox omnino per epidermidem radiatim in lacinias acutas fissam prorumpentia et fere superficialia, conica, atra, glabra. Asci cylindracei, paraphysati, octospori. Sporidia fusoidea, medio 1-sep-. tata, colorata.

1. Astrosphaeriella fusispora Sydow, in l. c., p. 260, 261 fig. IV. - 6401 Peritheciis sparsis, primitus epidermide atra tectis, mox erumpen-

tibus et basi insculpta applanata subsuperficialibus, sed lacinulis matricis cinctis, eximie tornato-conoideis, glabris, levibus, atris, 0,7-1 mm. latis et altis, carbonaceis, papilla nitidula praeditis; ascis cylindraceis, apice obtusis, 75-115  $\times$  15-18, octosporis; paraphysibus numerosis, filiformibus, ascis superantibus, 1  $\mu$  crassis; sporidiis distichis, fusoideis, utrinque attenuatis, medio 1 septatis et constrictis, pluriguttulatis,  $38-48 \times 6-8$ , dilutissime fuscidulis.

Hab. in culmis emortuis Phyllostachydis bambusoidis (Graminaceae), Kawauye-mura, pr. Mino, Japoniae (K. HARA) et in culmis Bambusae, in ins. Philipp. (BAKER).

2. Astrosphaeriella stellata (Pat.) Sacc., Amphisphaeria stellata Pat., 6402 Bull. Soc. Mycol. Fr. 1913, p. 223.— Peritheciis gregariis v. sparsis, subsuperficialibus, conoideis, nigris, duris, carbonaceis, levibus, poro apicali apertis, cuticula stellatim lacerata circumdatis,  $^2/_3$ - $^3/_4$  mm. altis, parietibus crassis sed fragilibus, nucleo albido; ascis cylindraceis, apice obtusis, 150-160 × 10-12, octosporis; paraphysibus, numerosis, hyalinis, linearibus plus v. minus ramosis; sporidiis distichis, fusoideo-elongatis, utrinque acutatis, septo constrictulis, contentu diviso et tune simulatim articulatis, 35-45 × 5-7.

Hab. in culmis B a m b u s a e (Graminaceae), Hanoi Tonkin, Asiae (DUPORT).— Habitus omnino Leptosphaeria stellatae sed sporidiis uniseptatis nec quinqueseptatis diversa.

## PROTOVENTURIA Berl. et Sacc. — Syll. IX p. 741, XI p. 315.

Protoventuria vancouverensis Dearn., Mycologia, 9., 1917, p. 348.— 6403
 Peritheciis sparsis, tenuiter carbonaceis, e globoso conicis, setosis, 120-150 μ diam., setulis rigidis, acuminatis, pungentibus, 30-55 × 4-6 (basi); ascis tereti-fusoideis, rectis curvulisve 45-55 × 14; paraphysibus linearibus asco longioribus, parcis; sporidiis fuligineis 2-3-seriatis, 1-septatis, 2-4-nucleatis, 14-15 × 4,5-5, cellula sup. latiore saepe grosse 1-nucleata, inf. 2-nucleata.

Hab. in cortice emortuo Aceris sp. (Aceraceae), Vancouver Island (John Macoun).

## **AMPHISPHAERIA** Ces. et De Not. — Syll. I p. 718, IX p. 741, XI p. 315, XIV p. 555, XVI p. 503, XVII p. 683, XXII p. 179.

1. Amphisphaeria Fourcroyae P. Henn., Hedw. vol. 48. (1908) p. 10.— 6404 Maculis effusis, fuscidulis; peritheciis sparsis, innato-superficialibus, subglobosis, ostiolatis, atris, 160-200 μ diam.; ascis cylindraceis, vertice obtusis, octosporis, paraphysatis, 80-100 ≈ 10-12; spo-

ridiis oblique distichis, oblongis vel clavatis, utrinque obtusis, medio septatis, haud constrictis, olivaceo-fuscis, 12-20 × 5-7.

Hab. in foliis Four croyae giganteae (Amaryllidaceae). Rio de Jan., Petropolis, Brasilia. - A Didymosphaeria pachytheca Sacc. et Syd. distincta.

2. Amphisphaeria Elaeagni Rehm, Ascom. Exsice. Fasc. 48. n. 1938 et 6405 Ann. Mycol. IX, 1911, p. 369. - Peritheciis gregariis, cortici immutatae interdum seriatim innatis, singulis v. binis coalitis, per corticem plerumque laciniatam prorumpentibus ab eaque cinctis, globoso conoideis, atris, haud nitentibus, minutissime papillulatis, hemiglobose prominentibus, glabris, excipulo crasso, parenchymatice fusce contexto, haud carbonaceo, 0,5.0,8 mm. diam.; ascis cylindraceis, apice rotundatis, c. 150 × 15-17, octosporis, J. ope -; sporis oblongis, utrinque paullulum attenuatis et rotundatis, medio septatis, vix constrictis, hyalinis, demum subfuscis, 22-25 \* 10, monostichis; paraphysibus filiformibus, septatis, hyalinis 3 µ cr.

Hab. in ramis Elaeagni angustifoliae (Elaeagnaceae), in arenosis Bolschoe Barsuki prope Tschelnae prov. Turgaj Turkestania (ANDROSSOW).

3. Amphisphaeria fungorum E. Licent, C. R. Ac. Sc. Paris, t. 170., 1920, 6406 p. 60, cum icon. -- Peritheciis primum immersis olivaceis demum liberis, nigris, sphaeroideis v. ovoideis, 0,2-0,5 mm. diam., sparsis v. gregariis; ascis numerosis paraphysatis, paraphysibus hvalinis. linearibus septatis; ascis clavatis 300-400 \* 20-40, octosporis; sporidiis oblique monostichis, bilocularibus, brunneis, raro 2-3 septatis, ovoideis v. fusoideis, medio fortiter constrictis.

Hab. parasiticum in Corticio calceo et lacteo (Fungi), Bombies prope Valenciennes, Gallia. - Status ascophorus Clasterosporii fungorum (Fr.) Sacc.

4. Amphisphaeria bambusina Syd., Enum. Philipp. Fungi I, in Philipp. 6407 Journ. of Sci. VIII (1913) p. 274.— Peritheciis solitariis vel binis, ternis aut quaternis seriatim dispositis, applanato-globulosis, primitus immersis, dein plus minusve erumpentibus et laciniis matricis ruptae semper cinctis, levibus, atris, papilla obtusa nitidula instructis, 700-1000 μ diam., carbonaceis, pariete ca. 70-100 μ crasso; ascis clavatis, apice rotundatis, breviter stipitatis, 170-210 × 20-30, octosporis, paraphysibus numerosissimis, stipatis, hyalinis, 1-1,5 µ crassis; sporidiis recte vel oblique monostichis, ellipsoideis vel ellipsoideo-oblongis, utrinque late rotundatis, medio septato-constrictis, obscure castaneo-brunneis, 32-36 \* 15-17.

Hab. in culmo emortuo Bambusae (Graminaceae), Luzon, Prov. Bataan, Limay, ins. Philipp. (P. W. GRAFF).

5. Amphisphaeria khandalensis Rehm, in Theissen, Ann. Mycol. IX, 6408 1911, p. 158. — Peritheciis applanato-globosis, parum immersis, cortice velut annulo denigrato breviter cinctis, levibus, nigris, papilla obtusa instructis, circ. 700 μ diam.; ascis fusoideis, p. sp. 120-150 × 8-9 (sporidiis 2-3-stichis), usque 200 / 5-6 (sporidiis monostichis); paraphysibus densissimis, hyalinis, simplicibus, flexuosis; sporis fusoideis, utrinque acicularibus, fuscis, 1-septatis, ad septum vix constrictis, typice ex utraque septi parte guttula una contigua praeditis, 42-52 × 4,5-5.

Hab. ad B a m b u s a m (Graminaceae), Khandala, Indiae or. (E. BLATTER). — In Amph. Edamensi P. Henn. proxima, sporae 50-60 \* 9-10, medio constrictae; in Amph. botulispora (Oke) sporae etiam majores latiores et loculis inaequalibus praeditae.

6. Amphisphaeria coronata Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2200.— Peritheciis sparsis, sub cortice immutato nidulantibus, globulosis, glabris, 0,8-1 mm. latis, in collum breviter elongato productis, ostiolo conoideo in medio areolae discoidali atra scabriuscula prominente, excipulo coriaceo, fusco; ascis cylindraceis, teneris, 200  $\mu$  usque longis, 7-8  $\mu$  latis, paraphysibus filiformibus obvallatis; sporidiis monostichis, fusiformibus, rectis, medio septatis, non constrictis, hyalinis dein flavidulis,  $25 \times 5 \cdot 6$ .

Hab. in culmis emortuis Gigantochloae Scribnerianae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

7. Amphisphaeria megalotheca Theiss., Ann. Mycol. X, 1912, p. 11, cum icon.— Theissen, Decad. Fl. Bras. n. 206.— Peritheciis hemisphaericis, rotundatis, gregariis in culmo denigrato, basi innatis, 0,7-0,8 mm. diam., atris, superne glabris rugulosis, inferne subiculo strigoso cinetis, setis nigerrimis usque 65 μ long. vestitis, poro pertusis, papilla nulla; ascis elongatis, late clavatis, apice obtusissime rotundatis, pedicello brevi noduloso, tunica crassa, p. sp. 140-225 × 38-45, receptaculo interiore 92-115 μ longo; sporis tristichis, cavo-convexis, utrinque attenuatis, viridulo-hyalinis, medio septatis, non constrictis, 56-62 × 10.

Hab. in Guadua (Graminaceae), Sao Leopoldo, Rio Grande do Sul Brasiliae (RICK).

8. Amphisphaeria Schizostachyi Rehm, Ascomyc. Philipp. VI, Leaflets 6411

of Philipp. Bot. VI (1914) p. 2262.— Peritheciis gregariis, innatis, conoideis, minute papillulatis, nigris, 1 mm. usque diam., parenchymatice contextis; ascis cylindraceis, octosporis, J., 100-100 × 8-9, filiformi-paraphysatis; sporidiis monostichis, fusiformibus, utrinque acutatis, medio septatis, utraque cellula ample 1-guttata, non constrictis, fuscis, 15-17 × 5-6.

Hab. in calamis emortuis Schizostachyi (Graminaceae), Los Baños, ins. Philipp. (S. A. REYES).

9. Amphisphaeria Leucaenae Rehm, Ascomyc. Philipp. IV, Leatlets of 6412 Philipp. Botany, VI (1913) p. 1940.— Peritheciis gregariis, cortici interiori late denigrato innatis, globulosis, minime papillulatis, dein per epidermidem prorumpentibus, demum plus minusve sessilibus, 0,5 mm. diam., glabris, parenchymate fusco contextis, siccis collabentibus, apice rugulosis contortisque; ascis evanidis; sporidiis ellipsoideis utrinque rotundatis, medio septatis et constrictis, fuscis, 12-15 \* 5-6.

Hab. in Leucaena glauca (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

10. Amphisphaeria Arengae Rehm, Ascom. Philippin. VIII, in Leaflt. 6413 of Philipp. Bot. VIII 1916, p. 2947.— Perithecia epidermidi longe extus atratae gregarie innata eamque laciniatim perrumpentia et prominentia, globulosa distincte breviter papillulata, nigra, glabra, carbonacea, 1 mm. lata. Asci evanidi. Sporae oblongo-subclavatae utrinque obtusae, medio septatae et constrictae, fuscae, 18-20 ≥ 7-8. Paraphyses evanidae.

Hab. ad emortuam Arengam (Palmae), Los Baños, Ins. Philipp. (S. A. REYES).

11. Amphisphaeria palawanensis Sydow, Philipp. Journ. of Sc., Bot. 6414 v. 9., n. 2, 1914, p. 166.— Peritheciis sparsis vel binis trinis coalitis, per corticem fissum prorumpentibus ab eoque cinctis, lenticulari-conoideis, atris, glabris, 1 mm. diam., distincte nitiduleque papillulatis; ascis crasse cylindraceis, apice rotundatis, 170-250 μ longis, 18-25 μ latis, octosporis, copiose paraphysatis; sporidiis monostichis, ellipsoideis vel oblongo-ellipsoideis, utrinque medio 1-septatis et constrictis, castaneo-brunneis, 30-35 μ longis, 15-16 μ latis.

Hab. ad ramos emortuos Uncariae (Rubiaceae), Palawan Taytay, Ins. Philipp. (MERRILL).

12. Amphisphaeria Citri P. Henn., Hedw. vol. 48. (1908) p. 107.— Pe- 6415 ritheciis subepidermicis, sparsis vel subaggregatis, pro parte erumpentibus, globulosis, atro-carbonaceis, minute ostiolatis, 400 μ circ.

diam.; ascis clavatis, apice rotundatis, longe stipitatis, octosporis, p. sp. 39-45  $\times$  8-11, pedicello 40-60  $\times$  2-3, paraphysatis; sporidiis subdistichis, oblique fusoideis, obtusis, medio 1-septatis, constrictis, atro-cinnamomeis,  $11-15 \times 4-5$ .

Hab. in ramulis emortuis Citri Limon um (Rutaceae), socia Tryblidiella rufula, hort. bot. Goeldi, Parà (BAKER).

13. Amphisphaeria hyalinospora W. Kirschst., Krypt. Fl. Brandenb. 6416 VII p. 256 (1911). — Peritheciis plerumque sparse gregariis vel singulis, initio immersis dein plus minusve prominentibus, subsphaericis, vel inter ligni fibras elongatis, ostiolo papillato vel breviter eylindraceo praeditis, 500-600  $\mu$  diam.; excipulo coriaceo, atro-brunneo, sparse setuloso vel piloso; ascis cylindraceo-clavatis, in stipitem breviusculum attenuatis, sursum rotundatis, octosporis, 100-120  $\times$  10-12, paraphysibus copiosis, filiformibus, ramosis, ascos longe superantibus; sporidiis monostichis vel irregulariter dispositis, elongato-fusoideis, bilocularibus, ad septum arcte constrictis, loculo inferiore magis elongato et tenuiore, hyalinis, 14-18  $\times$  6-7.

Hab. in ramis decorticatis Populi nigrae (Salicaceae), Rathenow, Germania. — Sporidia semper hyalina visa sed alia charactera hujus generis; verisimiliter sporidia demum fuscescunt. An potius Melanopsammae species?

14. Amphisphaeria brachyspora W. Kirschst., Krypt. Fl. Brandenb. VII 6417 p. 255 (1911).— Peritheciis sparsis, initio immersis dein prominentibus, hemisphaericis, basi applanatis, ostiolo minuto papillato praeditis, 400-500 μ diam.; excipulo tenui, carbonaceo, fragili, levi; ascis cylindraceo-clavatis, breve pedicellatis, apice rotundatis et valde incrassatis, 1-4-sporis, 60-85 × 7-9, paraphysibus filiformibus ramosis ascos superantibus; sporidiis late ellipsoideis, utrinque applanato-rotundatis, medio septatis, non constrictis, crassiuscule tunicatis, brunneis, 8-13 × 5-7.

Hab. in ramis decorticatis Salicis cinereae (Salicaceae), Grossbehnitz, in Germania. — Sporidia plerumque quaterna, nunquam octona facile distinguenda.

15. Amphisphaeria intermedia Sacc., Ann. Mycol. XII, 1914, p. 286.— 6418 Peritheciis laxe gregariis globoso-conoideis, breviter papillatis, ½ mm. diam., nigris, glabris, carbonaceis, basi matrice insculptis; ascis tereti-clavatis, brevissime stipitatis, 85-95 × 10-12, paraphysibus filiformibus densis obvallatis, apice rotundatis, octosporis; sporidiis distichis, fusoideis, utrinque acutulis, saepius lenissime curvis, 22-24 × 6, fuligineis, 2-4-guttatis, ad septum lenissime constrictis.

Hab. in cortice putrescente Salicis (?), (Salicaceae), M. Weisskirchen, Moraviae (F. Petrak).— Ab affini Amph. umbrina differt peritheciis dimidio minoribus, ascis crassioribus, sporidiis distichis. Rarissime sporida (spurie?) 3-septata occurrunt et tunc Trematosphaeriam pertusellam in memoriam revocant.

16. Amphisphaeria Clerodendri Rehm, Ascomyc. Philipp. V, Leafits. of 6419 Philipp. Botany, VI (1914) p. 2200. — Peritheciis gregariis, cortice innatis eumque protuberantibus, dein prorumpentibus, globulosis, minute papillatis, nigris, glabris, 250 μ latis, excipulo parenchymatico fusco; ascis cylindraceis, apice rotundatis, octosporis, 80 × 10, J-; paraphysibus filiformibus 1,5 μ cr.; sporidiis monostichis, ellipsoideis vel oblongis, utrinque obtusis, medio septatis, vix constrictis, fuscidulis, 10·12 × 6-7.

Hab. in Clerodendro Thompsonae emortuo (Verbenaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

17. Amphisphaeria notabilis Rehm, Ascomyc. Philipp. VI, Leaflets of 6420 Philipp. Botany, VI (1914) p. 2262. — Peritheciis late gregariis, ligno immutato innatis, globulosis, excipulo membranaceo tenuissimo instructis, corticem hemisphaerice protuberantibus, nigro-tectis, 0,5 mm. latis, ostiolo minutissime papillulato prominentibus; ascis cylindraceis, 100 × 12, paraphysibus filiformibus obvallatis, J.; sporidiis oblongis, utrinque obtusis, rectis, medio septatis, non constrictis, flavis, 18 × 7-8.

Hab. in ramo emortuo, Los Baños, ins. Philipp. (H. G. TEODORO).—A. dunarum Speg. valde similis videtur.

18. Amphisphaeria Rochai Theiss., Broteria, Bot., v. XII, 1914, fasc. 6421 I, p. 30.— Emergens, cortice rupto cincta, dein libera densinscule gregaria (saepe seriatim), atra, opaca, orbicularis, basi convexoapplanata, supra concavo-conica, vertice obtuso umbonato, 500-800 μ lato, coriaceo-carbonacea. Asci cylindracei, 250-300 × 28-38, supra rotundati, infra breviter pedicellati, paraphysibus filiformibus, rectis, simplicibus, numerosis, longe obvallantibus. Sporidia octona monosticha, primo laete olivacea, dein brunneo-nigra, 45-54 × 20-24, granuloso farcta, utrinque rotundata, medio septata, subcurvula. Asci J ope non coerulescunt. Paraphyses 1,5 μ cr., apice leniter incrassatae.

Hab. in ligno corticato, Cearà Brasiliae (DIAS DA ROCHA).

NEOPECKIA Sacc.— Syll. IX p. 749, XI p. 317, XIV p. 558, XVI p. 506, XVII p. 686, XXII p. 186.

1. Neopeckia Carpini Chen. et Flag. in J. E. Chenantais, Bull. Soc. 642 Mycol. de Fr., XXXV, 1919, p. 132, fig. 24. - Peritheciis globulosis atris nitidis 4.800 µ, nonnullis in ligno putrescente infossis. ostiolis exhaustis, aut in hujus fissuris arcte farctis plerumque in subiculo, passim lanuginoso sterili, aliquoties carbonaceo, hyphis brunneis 4.5 µ valde intricatis (larvarum excavationibus) ligno pulverulento commixtis composito stantibus; aliis semi-immersis, hyphis densis praeter ostiolum omnino, aliis nudis minute verrucosis basi solum vestitis, quibusdam more Herpotrichia zôna circa porum cinerascente decalvantibus; collo crasso, papillato saepissime cylindraceo acie dentato + patulenti, crateriformi, sporidiis conglomeratis occluso, postea latissime hiante, poro pertuso quandoque imperforato (per. involutis), strato tenui carbonaceo obducto; ascis cylindraceis apice rotundatis longe stipitatis, 210 × 15, p. sp. 160 × 15, 8-sp., paraphysibus filiformibus ramosis ascos superantibus copiosis, obvallatis; sporidiis didymis oblique monostichis facie alia ellipsoideis, alia rhomboideis, leviter applanatis, 2- v. pluriguttulatis fulvis septo primum valde infuscato, vix depresso, dein intense fuligineis, episporio hyalino persistente cinctis, loculis sursum attenuatis, dehiscentiae rimis utrinque oppositis percursis, caruncula vel muerone conico (in extimis) hyalino + deciduo, sporidia in asco jungentibus, praeditis, 22-32 × 12-16.

Hab. in ligno carioso Carpini (Betulaceae), Rigny-sur-Arroux Gallia (C. Flageglet). - « A Valsaria cariei sporidiis appendiculatis et subiculo varie densato, copioso; a Valsa apiculata sporidiis crassioribus et episporio hyalino persistente praecipue differt: (an ambo semper destitutae (?). Indubitate ad Neopeckiam istae pertinent. Cum Neopeckia quercina Del. (Bull. Soc. Myc. Fr. 1890), nil. praeter subiculum sporidiasque didymas, commune N. Carpini habere videtur; sed propter inopes auctoris notas dubium ».

2. Neopeckia episphaeria v. Höhnel, Ann. Mycol. 17., 1919, p. 120. - 6423 Peritheciis globosis, carbonaceis, ruvidis, opacis, 200-280 µ cr., superficialibus minute ostiolatis; paraphysibus numerosis filiformibus; ascis cylindraceis, tenuiter tunicatis, octosporis, monostichis, 80 × 8; sporis brunneis bilocularibus, ovato-ellipsoideis loculo superiori vix crassiori, septo demum constrictulis, 13-14 × 6,5.

Hab. ad stromata Hypoxylonis rubiginosi (Fungi) in ligno Fraxini, prope Tullu in Austria Inf. (v. Höhnel).

3. Neopeckia japonica Sydow et Hara in Sydow, Annales Mycolog. 6424 XI, 1913, p. 261. - Peritheciis sparsis v. paucis aggregatis, su-

perficialibus, quoad formam variabilibus, junioribus latioribus et humilioribus, senioribus globulosis v. late conico-globosis, 400-850  $\mu$  diam., atris in mycelio parce evoluto ex hyphis fuscis formato mox evanescente insidentibus, ubique, summo apice tantum excepto, pilis numerosis flexuosis v. rigidulis castaneo-brunneis obtusis 100-300  $\mu$  long. 7-9  $\mu$  latis, 4-10-septatis, rectis, apice truncatis, ostiolo punctiformi, contextu opaco ; ascis clavato-cylindraceis, apice obtusis, deorsum sensim in stipitem attenuatis, 90-120  $\approx$  9-11, octosporis, filiformiter paraphysatis; sporidiis oblique monostichis usque subdistichis, fusoideis, 1-septatis, primitus et diu hyalinis valde constrictis utrinque attenuatis, postremo fuscidulis vix constrictis apicibus obtusis, 17-20  $\approx$  4,5-6.

Hab. in culmis emortuis Sasae paniculatae (Graminaceae), Kawauye-mura prov. Mino, Japoniae (K. HARA).

4. Neopeckia rhodostoma Syd., Ann. Mycol. 15., 1917, p. 204. — Pe-6425 rithecia superficialia, gregaria, rarius dispersa, inferne hyphis numerosis rectiusculis vel flexnosis simplicibus obscure castaneo-brunneis obtusis remote septatis 150-300 μ longis ca. 4 μ crassis obsita, carbonacea, 400-600 μ diam., primitus circa ostiolum planum apertum roseola, tandem ubique atra, non verrucosa; asci numerosi, clavati, ad apicem rotundati, 95-115 × 12-16, octospori, copiose filiformiter paraphysati; sporae distichae fusoideae, utrinque attenuatae, acutiusculae, rarius obtusae, medio septatae non constrictae, 30-42 × 6-8.

Hab. in culmo putrido graminaceo, Biliran, Ins. Philipp. (R. C. Mc. Gregor). — Affinis N. rhodostictae.

5. Neopeckia rhodosticta (B. et Br.) Sacc. — Syll. XI p. 317. — var. 6426 magnifica Rehm, Ascom. Philippin. VIII, in Leafit. of Philippin. Bot. VIII, 1916, p. 2947. — Perithecia in mycelio late explanato fusco-nigro dispersa, rarius conferta immersa, globulosa parenchymatice crasse e cellulis magnis contexta nigrofusca, pilis praelongis, rectis, simplicibus, rarissime dichotomis fuscis 4 μ latis, mycelium formantibus obtecta, modo apice denudata et circa ostiolum planum, apertum dilute roseola, non verrucosa 0,5-0,8 mm. diam.; asci clavati, vix stipitati, 120-130 × 15, 8-spori; sporae fusoideae, rectae, medio septatae et constrictae, primitus utraque cellula 4-magniguttata, hyalinae, demum subfuscae, 35-40 × 8-12, distichae. Paraphyses filiformes, 1,5 μ, ascos superantes.

Hab. ad Pandanum sabutan (Pandanaceae), Los Baños, Ins. Philipp. (S. A. REYES). - Neop. nobilis Rick affinis, attamen pe-

ritheciorum forma et magnitudine, sporisque -50 × 12 verisimiliter diversa.

6. Neopeckia anceps J. E. Chenantais, Bull. Soc. Mycol. de Fr., XXXV, 6427 1919, p. 128, fig. 22. — Peritheciis membranaceo carbonaceis, nigris, rugulosis, 4-500 μ, raro intra-corticalibus ellipsoideis 5-6 valsoideo-aggregatis, plerumque liberis superficialibus usque ad 1 mm. cr., varie sociatis, ovoideis, pyriformibus, mutua pressione deformibus, varie collabescentibus, imo passim breviter pilosis vel hyphis erectis circumdatis sed semper ad basim mycelio distincto ramoso nigricante radiciformi ortis, jugiter astomis; ascis numerosis rectis tereti-clavatis nec stipitatis tenuissime tunicatis, 70-80 × 10; pseudo-paraphysibus crassis ventricosis; sporidiis octonis recte vel saepius transverse monostichis, didymis hyalinis dein pallide fuscescentibus, loculis transverse sphaericis, saepius ovalibus, ad septum valde constrictis, pluri-v. 2-guttulatis postea eguttulatis, 8-9 × 7-8.

Hab. in ramis vetustis Platani occidentalis (Platanaceae), Bois-Briand prope Nantes, Gallia.

**OTTHIA** Nke.— Syll. I p. 735, IX p. 752, XI p. 317, XIV p. 560, XVI p. 507, 1135.

1. Otthia deformans Patouillard, Bull. Soc. Mycol. de Fr., XXXIV, 6428 1918, p. 90. — Hypertrophyta. Peritheciis sphaeroideis 300 μ circ. er., nigris, duris, ostiolo parum distincto praeditis, breviter verruculoso-undulatis, opacis, brunneis, 30 μ circ. altis, e stromate tenui nigro quandoque nullo oriundis, basi pilis brunneis, simplicibus, rectis v. flexuosis, opacis sed apice pellucidis, transverse septatis, copiosis, circ. 100 × 6. praeditis; ascis cylindraceis, brevissime stipitatis, 110 × 18, octosporis, irregulariter distichis, paraphysibus numerosis, linearibus, simplicibus, 3 μ cr., subhyalinis circumdatis; sporidiis brunneis ellipsoideis, uniseptato-constrictulis, utrinque rotundatis, levibus, loculis uni-v. pluriguttulatis, 18-22 × 9-10.

Hab. in tumoribus ramealibus (5-6 cm. long. 6-8 mm. cr.) Philippiae sp. (Ericaceae), in Ins. Madagascar (VIGUIER).

2. Otthia Panici F. L. Stevens, Trans. III. Ac. of Sc. v. X, 1917, p. 6429 185. — Stromatibus nigris, linearibus, 110-470 × 60 v. etiam longioribus, erumpentibus crustaceis; peritheciis numerosis, in stromate immersis, ostiolatis; ascis elongato-cylindraceis; sporidiis monostichis, obscuris, 1-septatis 7-9 × 3.

Hab. in foliis Panici maximi (Graminaceae), Jayuya, Preston's ranch, Amer. Centr.

3. Otthia Castilloae Syd., Ann. Mycol. 14., 1916, p. 79.— Peritheciis 6430 hypophyllis, erumpenti-superficialibus, ex stromate minuto subepidermale oriundis, 4.20 dense confertis vel caespitosis, subinde fere concrescentibus, atris, membranaceo-coriaceis, globoso-oyatis vel ovatis, usque 300 µ altis, 100-200 µ latis, apice in ostiolum praedistinctum 60-100 µ longum 35-45 µ latum productis, contextu obscure olivaceo-brunneo ex cellulis polyedricis 10-14 µ diam, composito; ascis cylindraceis, longiuscule stipitatis, 60-85 \* 9-12, octosporis; paraphysibus ascos superantibus copiosis, filiformibus, hyalinis, 1 a crassis; sporidiis distichis, fusoideis, medio 1-septatis, non constrictis, olivaceo-flavis, 22-25 × 3,5-4.5; pycnidiis simul praesentibus peritheciis similibus, sed minoribus; microstylosporis continuis, utrinque guttulatis, hyalinis, 2-3 × 1; macrostylosporis anguste ellipsoideis vel oblongis, continuis, hyalinis, guttulatis, 12-14 \* 3.5.5.

Hab, in foliis vivis Castilloae Ulei (Moraceae), Seringal Auristella Rio Acre, Peruviae (E. ULE).

4. Otthia Rubi v. Höhnel, Ann. Mycol., 17., 1919, p. 123.— Perithe- 6431 ciis nigris, ruvidis, globosis v. parum depressis, hypostromate tenuiter filamentoso immersis usque 700 \mu cr., solitariis v. in parvos greges rotundatos v. elongatos dispositis; peritheciis extus in parte inferiore hyphis violaceo-brunneis, septatis ramosulis 5-6 μ cr. rectis praeditis; parietibus 52 µ cr., ostiolo rotundato plus v. minus lato; paraphysibus numerosissimis filiformibus, tenuibus, collabescentibus; ascis numerosis, clavatis, crasse tunicatis, breviter pedicellatis, octosporis, 120-220 × 14-16; sporis immaturis, paucis tantum in ascis violaceo-brunneis, bilocularibus, 4-guttulatis, crasse tunicatis, utrinque angustato-rotundatis, 22-32 × 8-8,5, septo constrictis.

Hab. in sarmentis Rubi Idaei (Rosaceae), prope Malmedy Arduennae (Libert), prope Toulouse (Roumeguère in Fungi gall. exsicc. n. 1585, 1596 sub Melanopsamma mendax et ruborum). - Verisimiliter huc ducenda est O. Rosae Fuck. f. Rubi Rehm in Strasser, Verh. zool.-bot. Ges. Wien 69., 1919, p. 360; ascis cylindraceis 160-180 × 16 longe angusteque pedicellatis 40-50 μ, sporidis monostichis (in Sonntagberg, Austria inf.), Gallia.

DELITSCHIA Auersw. - Syll. I p. 732, IX p. 747, XI p. 317, XIV p. 558, XVI p. 506, XVII p. 686.

1. Delitschia sydowiana W. Kirschst., Krypt. Fl. Brandenb., VII, p. 6432 192 (1911). - Peritheciis superficialibus, sparsis vel paucigregariis,

piriformibus vel phialaeformibus, 240-300  $\mu$  altis, 150-225  $\mu$  latis, in ostiolum longiusculum apice obtusum productis, contextu membranaceo, minute pseudoparenchymatico, levi, nitidulo, in parte superiore pallido, subhyalino; ascis ellipsoideis, breviter pedicellatis, sursum rotundatis, facile diffluentibus, oetosporis, 95-110  $\approx$  20-22; paraphysibus facile evanidis intermixtis sporidiis irregulariter distichis, late fusiformibus, bicellularibus, initio hyalinis dein obscure brunneis, ad septum non constrictis, utrinque appendicula hyalina hemisphaerica auctis, 23-30  $\approx$  9-12.

Hab. in putaminibus putrescentibus Pruni domesticae (Rosaceae), prope Berlin, Germania (SYDOW).

POROSTIGME Sydow, Ann. Mycol. 15., 1917, p. 202. — Characteres 6433 Dimerinopsidis, sed paraphyses nullae et sporidia colorata. — Typ. gen. P. Scheffleri (P. Henu. sub Dimerosporio, cnfr. Syll. XVII p. 540) Syd.

## Sect. 6. Hyalophragmiae

**SPHAERULINA** Sacc. — Syll. II p. 186, IX p. 846, XI p. 336, XIV p. 581, XVI p. 528, XVII p. 692, XXII p. 189.

Sphaerulina Alni A. Lorr. Smith, Trans. Brit. Mycol. Soc. t. VI, 6484
 P. II, 1918, p. 151. — Peritheciis laxe gregariis, nigris, sublentiformibus, ostiolatis, immersis, ostiolis epidermidem perrumpentibus, ca. 1 mm. diam.; ascis aparaphysatis, dense confertis, haud vel vix rosulatis, clavato-cylindraceis, rectis vel leniter curvatis, apice rotundatis, ad basim in stipitem ca. 15 μ long. attenuatis; sporidiis inaequaliter distichis, oblongo-ellipsoideis, rectis, vel interdum curvulis, 3-septatis, 22-30 × 8, hyalinis, guttulatis.

Hab. in cortice suberoso Alni emortui (Betulaceae), West Kilbride, Ayrshire (D.A.Boyd), Anglia.

2. Sphaerulina Aucubae Shirai et Hara, Bot. Magaz. Tokyo XXV (1911) 6435 p. 71, tab. 2 fig. 18-19. — Maculis epiphyllis, rotundatis, obscure brunneis; peritheciis sparsis, immersis, globosis vel hemisphaericis, membranaceis, papillatis, obscure brunneis, 120-150 μ altis, 120-160 μ latis; ascis clavatis, cylindraceis vel fusiformibus, apice rotundatis, 40-80 × 10-13, aparaphysatis; sporidiis distichis vel oblique monostichis, fusiformibus, ellipsoideis vel oblongis, 2-3-septatis, non constrictis, hyalinis, 20-27 × 6-8.

Hab. in foliis Aucubae japonicae (Cornaceae), Prov. Mino, Gifu, Japonia (K. HARA).

3. Sphaerulina divergens Rehm, Ann. Mycol. XI, 1913, p. 397.— Pe-6436 rithecia gregaria, innata, globulosa, nigra, poro perspicuo pertusa, fusce membranacee contexta, glabra, 0,15 mm. diam. Asci oblongi apice rotundati, sessiles, 50-55 × 6-8, 8 spori. Sporae fusiformes, rectae, interdum subcurvatae, utrinque obtusae, medio septatae, vix constrictae, demum 3-interdum 2-septatae, hyalinae, -15 × 4-5, distichae. Paraphyses nullae.

Hab. ad culmos Elymi canadensis (Graminaceae), Kulm, N. Dakota, Amer. bor. (Brenckle). — Genuina Sphaerulina, nec ad Metasphaeriam arenariam Sacc. (Syll. XXIII p. 199) nec ad Leptosphaeriam Elymi Atk., Syll. XIV, p. 570 referri potest.

4. Sphaerulina Coronillae-junceae Bub. et Fragoso, Hedw. LVII, p. 5 6437 (1915). — Peritheciis laxe gregariis, subepidermicis, globosis, saepe concavis 150-170  $\mu$  diam., contextu crasso grosse parenchymatico, castaneo, papilla brevi erumpentibus; ascis oblongis,  $40-60 \times 15-20$ , apice rotundatis incrassatisque, basi breve pedicellatis, 8-sporis, aparaphysatis; sporidiis tristichis v. tetrastichis, oblongo-fusoideis v. oblongo-clavatis,  $20-24 \times 6-7.5$ , triseptatis, non constrictis, utrinque rotundatis v. basi tenuatis, flavidis.

Hab. in ramulis emortuis Coronillae junceae (Leguminosae), prope Pedroso de la Sierra, Hispaniae (Gz. FRAGOSO).

5. Sphaerulina maroccana Gz. Fragoso, Bol. Soc. Esp. Hist. nat. 1917, 6438 p. 81. — Peritheciis hypophyllis, immersis, per totam folii superficiem sparsis (macula nulla v. maculis minutis circularibus, 2 mm. diam.) globosis v. globoso-conoideis 80-120 μ diam., v. suboblongis 80-125 × 70-108; ostiolo vix prominulo, pertuso, contextu crassiusculo parenchymatico; ascis ovoideis, sessilibus, aparaphysatis, 50-56 × 28-35, rarius 80 × 35; sporidiis inordinatis, oblongis v. oblongo-ellipsoideis v. subclavatis, utrinque rotundatis, 3-septatis, ad septum medium constrictis, hyalinis, postremo leviter coloratis, 20-25 × 12, loculis saepe guttulatis.

Hab. in foliis vivis Trifolii Bocconii (Leguminosae), prope Melilla, Gurugù, Marocco (A. CABALLERO).

6. Sphaerulina intermedia Vouaux, Bull. Soc. Mycol. Fr., 1913, p. 37. – 6439 Peritheciis sparsis, numerosis, basi v. dimidium immersis, nigris, subsphaeroideis, v. supra subconoideis, apice ostiolo simplici apertis, 140 250 μ diam.; contextu nigro brunneo, pseudoparenchymatico e cellulis polygoniis 6-7 μ diam. constituto, extus strato amorpho nigro praedito; ascis clavatis, crasse breviterque pedicellatis, apice late rotundatis, tunica tenuissima praeditis, octosporis, raro 7-4-

sporis, 57-82 × 15-18; gelatina hymeniali copiosa, sed paraphysibus aegre visibilibus, tenuissimis; sporidiis distichis, obtuse fusoideis plerumque curvulis, hyalinis v. senectute flavidulis, magnitudine et septis variabilibus; primum continuis granulosis et 1-2-guttulatis demum continuis v. 1-7 septatis, constrictulis, v. non, 21-34 × 5,5-S.

Hab. in thallo Leptogii microscopici (Lichenes), prope Malo-Terminus, Gallia bor. (BOULY DE LESDAIN). - Sph. corniculatae (Wallr.) et Sph. dolichoterae valde affinis.

7. Sphaerulina smilacincola Rehm, Ascomyc. Philipp. I, in Philipp. 6440 Journ. of Sci. VIII (1913) p. 185 .- Peritheciis in centro macularum orbicularium flavido-brunneolarum, haud distincte marginatarum ca. 2 cm. lat., interdum confluentium albido-cinerascente, 0,5-1 em. lato gregarie innatis, dein sessilibus, globulosis, glabris, poro pertusis, fuscis, parenchymatice contextis, ca. 120 \mu latis; ascis rosulatis, clavato-ventricosis, sessilibus, 40.50 × 10-12, aparaphysatis, octosporis; sporidiis 2-3-stichis, oblongis, rectis, primitus medio-dein 3-septatis, cellulis plerumque magni-guttatis, haud constrictis, hyalinis, 20 × 4-5.

Heb. in pagina superiore foliorum vivorum S milacis (Liliaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Ba-KER). — An status magis evolutus Sphaerellae smilacicolae (Schw.) Cke.

8. Sphaerulina linicola Bubàk, III. Beitr. Pilz. Montenegro, in Bota- 6441 nikai Közlemények, 1915, p. (57). - Peritheciis dense gregariis, 100-200 µ in diam., globoso-applanatis, subepidermicis, demum nudis, nigris, nitidulis, contextu crasso-castaneo, grosse pseudoparenchymatico; ascis fasciculatis, ovoideo-clavatis vel oblongo-clavatis,  $40-60 \times 10-17$ , apice late rotundatis, incrassatis, basi breve pedicellatis, octosporis, aparaphysatis; sporidiis tristichis vel supra distichis, fusoideis, 17-22 \* 4-5,5, curvatis, rarius rectis, utrinque attenuatis, parum rotundatis, hyalinis, typice triseptatis, rarius biseptatis vel uniseptatis.

Hab. in caulibus emortuis Lini laevis Scop. (Linaceae), Durmitor in loco dicto « Lokvice » (ca. 2400 m. alt.), Montenegro.

9. Sphaerulina Citri K. Hara, Morbi arb. fruct., jap. t. I.5 f. 1. -- Ma- 6442 culis nullis; peritheciis hypophyllis, sparsis v. gregariis, punctiformibus, nigris, globosis v. subglobosis, 100-150 μ diam., epidermide tectis, contextu cellulis 4-10 µ diam., atro-brunneis, ostiolo papilliformi; ascis clavato-cylindricis, v. lanceolatis, stipitatis, 8-sporis

 $60-80 \times 10-13$ ; paraphysibus nullis; sporidiis distichis, ovoideis v. fusiformibus, 3-septatis, hyalinis,  $16-20 \times 6-7$ .

Hab. in foliis C i t r i sp. (Rutaceae), Prov. Owari Shino-jima, Japoniae (K. HARA, 1916).

10. Sphaerulina salicina Sydow, Annales Mycol. XI, 1913, p.262. — 6443 Peritheciis nunc sparsis, nunc plus minusve aggregatis, minutis, ca. 150-225 μ diam. sub epidermide tumidula corticis nidulantibus, globosis, e mutua pressione subinde angulatis, atris, nucleo griseo; aseis fasciculatis, subsessilibus, cylindraceis, 110-140 × 9-10, octosporis, paraphysibus plane destitutis; sporidiis recte monostichis, ellipsoideo-oblongis v. oblongis, utrinque late rotundatis, primitus 1-septatis, dein semper 3-septatis, ad septum medium plerumque leniter contractis, hyalinis, 15-18 × 5,5-7,5, hyalinis.

Hab. in ramis siccis Salicis Iongifoliae (Salicaceae), prope Kulm, North Dakota, Americae bor. (J. F. Brenckle). — Socium Coryneum salicinum (Cda) Sacc.

METASPHAERIA Sacc. — Syll. II p. 156, IX p. 825, XI p. 333, XIV p. 582, XVI p. 527, XVII p. 695, XXII p. 193.

1. Metasphaeria varia Dearn. et House, N. York St. Mus. Bull. n. 188, 6444 p. 35 (1916). — Peritheciis crebre sparsis, 0,5 mm. inter se remotis v. confertis, cortice insidentibus et lignum nigrificantibus, demum pustulatim erumpentibus circ. 0,3 mm. cr., depresse globosis et ostiolo brevi variabili praeditis, in sectione albis et nigro marginatis; ascis parce et indistincte paraphysatis, paraphysibus collabescentibus et tunc muco late indutis; ascis clavatis crasse tunicatis 75-100  $\mu$  long.; sporidiis hyalinis distichis, constrictis, magnitudine variabilibus,  $15 \times 3,27 \times 3$  v. usque  $33 \times 6$ , 3-8-septatis, quandoque septis duobus longitudinalibus praeditis.

Hab. in ramis emortuis Rhus copallinae (Anacardiaceae), North Bay, Oneida Co., Amer. bor. (H. D. House).

2. Metasphaeria honamicana Sacc., Ann. Myc. XI, 1913, p. 561, Nuovo 6445 Giorn. Bot. it. N. S. v. XXI, 1914, p. 117. — Peritheciis in areis amplis arescendo isabellinis elevatulo marginatis laxe gregariis, minutis, subhemisphaericis breviter papillatis, 150·170 μ diam., nigris, contextu duriusculo, celluloso, atro-fuligineo: ascis tereti-obclavatis, brevissime noduloso-stipitatis, 60·70 × 12·13, paraphysibus copiosissimis filiformibus, hyalinis obvallatis, octosporis; sporidiis subdistichis v. oblique monostichis tereti-oblongis, 18·20 × 6, initio grosse 2-5-guttatis, dein 3-raro 4-septatis, utrinque rotundatis, cel-

lulis binis inferioribus angustioribus.

Hab. in foliis languidis Monsterae deliciosae cultae (Araceae), in horto C. Attard (Insula Melita) (Doct. Borg). — Affinis Metasph. nervisequae (Wint.) Berl. et Vogl. nec non M. Hederae et M. nobili.

3. Metasphaeria nigrotecta Rehm, Ann. Mycol. XI, 1913, p. 399.— Pe-6446 rithecia cortici innata, epidermide atrata obtecta, plerumque gregaria, inde fere stromatice confluentia, globosa, papillula minutissima peridermium hemisphaerice elatum perforante, membranacee contexta, 0,4-0,5 mm.; asci cylindracei, 100 × 4-5, 8-spori; sporae fusiformes, utrinque acutatae, rectae, transverse 5-septatae, hyalinae, 20 × 3-4, fere 1-stichae. Paraphyses filiformes, septatae, 2 μ cr.

Hab. ad ramulos C a r p i n i (Betulaceae), Prov. Batum Czurgety Caucasiae (Newodowsyi). — Affinis videtur Sphaeriae depressae Fuck. (Metasphaeria Sacc., Syll. II p. 166).

4. Metasphaeria abortiva F. L. Stevens, Trans. Ill. Ac. of Sc. v. X, 6447 1917, p. 186, fig. 7. — Maculis foliicolis 3.5 mm. diam., orbicula. ribus, pallidis, utrinque visibilibus, centro nigrescentibus; peritheciis singulis v. quandoque paucis in quoque macula, nigris, 470-630 × 40-50, subcuticularibus, in hypophyllo erumpentibus; ascis irregularibus, tenuiter tunicatis 68 × 27, octosporis; sporidis inordinatis, 31 × 7, biseptatis, hyalinis v. tenuissime coloratis, cellula media minori.

Hab. in foliis V a r r o n i a e a l b a e (Borraginaceae), Mayaguez, Maricao, Arecibo-Lares Road, Porto Rico, Amer. Centr.

5. Metasphaeria papulosa (D. R. et Mont.) Sace. II p. 168, IX p. 838 — 6448 f. limbalis Gonz. Frag., Mem. R. Soc. Españ. Hist. Nat. t. 11., 1919, 3., p. 89. — Peritheciis praecipue hypophyllis, in maculis albidis linea nigra limitatis insidentibus, plerumque prope foliorum marginem, amphigenis, tectis, globosis, usque 175 μ diam., vix papillatis, poro pertusis contextu tenuiter membranaceo; ascis cylindraceis, breve stipitatis, apice incrassatis, rotundatis, usque 85 × 14, paraphysibus filiformibus obvallatis; sporidiis hyalinis, distichis, fusoideis vel navicularibus, rectis, 28-24 × 4-4,5, primum guttulatis, demum 3-septatis, loculis 1-2-guttulatis, vel non.

Hab. in foliis adhuc vivis Buxi sem pervirentis (Buxaceae), prope Centellas, Hispania (PROF. A. CABALLERO). — A f. Buxi Sace. characteribus macularum diversa.

6. Metasphaeria corruscans Rehm, Ascom. Philipp. VIII, in Leafit. of 6449
Philipp. Bot. VIII, 1916, p. 2949.— Perithecia gregaria in maculis

epiphyllis orbicularibus non marginatis vix fuscidule decoloratis, demum corrugatis, 1-3 cm. latis, ad basim innata hemisphaerice prominentia, non papillulata poro perspicuo pertusa, glabra, atra, membranacea 0,3-0,5 mm. lata; ascis clavatis apice rotundatis, 50 × 10, 8-sporis; sporis fusoideis, rectis, hyalinis, 3-septatis, 15 × 4-5,5, distichis. Paraphyses filiformes.

Hab. ad folia Capparidis horridae (Capparidaceae), Los Baños, Ins. Philipp. (C. F. BAKER). - Foliis valde noxia videtur.

7. Metasphaeria celastrina Syd. et Butl., Ann. Mycol. IX, 1911, p. 6450 408. - Peritheciis sparsis, in juventute fere omnino in cortice immersis, dein parte superiore erumpentibus tandemque superficialibus, atris, globosis, 350-450 µ diam., ostiolo prominente conico 300-425 μ longo praeditis; ascis elongato-cylindraceis, 110-140 × 5-6, octosporis, filiformiter paraphysatis; sporidiis stricte (haud oblique) monostichis, oblongis, hyalinis, 3-septatis, cella tertia subinde crassiore,  $20-23 \times 5-6$ .

Hab. in ramis corticatis emortuis C e la stri sp. (Celastraceae), Pusa, Indiae or. (E. J. Butler). - Ob perithecia prominentia longe ostiolata ad Ceratostomaceas vergit itaque Ceratosphaeriam consideranda potest.

8. Metasphaeria ambrosiaecola Atk. — Syll. XIV p. 583. — var. lvae 6451 Rehm, Ascom. Exsicc. n. 2144 et v. Höhnel Ann. Mycol. 16., 1918, p. 216. — Caulibus a peritheciis depressis late maculiformiter tectis: ascis clavatis breviter pedicellatis 80 × 14; sporidiis clavato-fusoideis, brunneis 26 × 8,5, transverse 5-septatis (et septum longit, interruptum quandoque visum).

Hab. in Iva xanthifolia (Compositae), Kulm, N. Dakota, Amer. bor. (BRENCKLE). - Verisimiliter spec. nov. Pleosporae.

9. Metasphaeria Rehesii Sacc., Ann. Mycol. XII, 1914, p. 305. — Perithe- 6452 ciis laxiuscule gregariis, subcutaneo-erumpentibus, nigricantibus, globoso depressulis, 135-145, ostiolo rotundo 10-12 \mu diam. pertusis, contextu dense celluloso atro-fuligineo; ascis fusoideo-clavatis, utrinque acutiuseulis, breviter stipitatis, filiformi-paraphysatis, octosporis; sporidiis oblique monostichis v. subdistichis, fusoideis utrinque obtuse tenuatis, 17-19 × 4,5-5,5, subrectis, 3-septatis, non v. vix constrictis, grosse 4-guttatis, hyalinis.

Hab. in caulibus emortuis. Sy nedrellac nodiflorae (Compositae), Los Baños, Luzon, Ins. Philippin. (S. A. REYES). — A speciebus in Compositis occurrentibus diversa.

10. Metasphaeria abundans Rehm, Ascomyc. Philipp. V, Leaflets of 6453

Philipp. Botany, VI (1914) p. 2201.— Peritheciis cortici intus dilute nigritulo creberrime innatis, ramulos ambientibus, globulosis, epidermidem elevantibus et ostiolo minuto perforantibus, nigris, glabris, 120  $\mu$  latis, parenchymatice contextis; ascis cylindraceis, paraphysatis, octosporis,  $80 \times 6$ ; sporidiis monostichis fusiformibus, rectis, 3-septatis, non constrictis, hyalinis,  $10 \times 3$ .

Hab. in Alangio begoniaefolio (Cornaceae), emortuo, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

11. Metasphaeria melitensis Sacc., Nuovo Giorn. bot. it. N. S. v. XXII, 6454 1915, p. 38. — Peritheciis dense et late gregariis, interdum confluendo stromate atro counexis, globosis subcutaneo-erumpentibus, 160 μ diam. nucleo diu albo farctis, ostiolo obsoleto; ascis cylindraceis, apice rotundatis, subsessilibus, 110-120 × 11-12, copiose filiformi-paraphysatis, octosporis; sporidiis oblique monostichis, 3 plerumque, raro 4-septatis, ad septum medium constrictis, utrinque, praecipue apice obtusatis, saepe inaequilateris, varie guttulatis, hyalinis, 22-24 × 6-7, loculis 3 superioribus paullo crassioribus.

Hab. in ramulis emortuis Quercus Ilicis (Fagaceae), Addolorata, Ins. Melita.

12. Metasphaeria Gigantochloae Rehm, Ascomyc. Philipp. V, Leaflets 6455 of Philipp. Botany, VI (1914) p. 2202. — Peritheciis gregariis, innatis, nigro-tectis, globulosis, glabris, ostiolo minuto prominente, 200 μ latis, parenchymatice contextis; ascis cylindraceis, filiformi-paraphysatis, 100 × 6; sporidiis monostichis, fusiformibus, rectis, 3-raro 4-septatis, non constrictis, hyalinis, 15 × 3.

Hab. in rachide emortua G i g a n t o c h l o a e (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

13. Metasphaeria Schizostachyi Rehm (ubi?) — fm. congregata Rehm, 6456 Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2263.— Peritheciis gregariis, culmum ambientibus, innatis, globulosis, peridermium protuberantibus, papillula conoidea minutissima atra prominenti, parenchymatice contextis, 0,2 mm. diam.; ascis fusoideis, filiformi-paraphysatis, 50 × 10-12; sporidiis fusiformibus, utrinque acutatis, 3-5 septatis, hyalinis, 15-20 × 3.

Hab. in culmis Schizostach y i (Graminaceae), emortuis, Los Baños, ins. Philipp. (S. A. REYES).

14. Metasphaeria Raimundoi Rehm, Ascomyc. Philipp. IV, Leaflets of 6457 Philipp. Botany, VI (1913) p. 1939. — Peritheciis sparsis, cortice innatis, globulosis, epidermidem protuberantibus, papillula conoidea

perrumpentibus, atris, glabris, 300  $\mu$  latis, excipulo fusco, crasso, parenehymatice contexto; ascis cylindraceis, apice rotundatis, octosporis, 200  $\approx$  8; paraphysibus filiformibus, septatis, 1,5-2  $\mu$  crassis; sporidiis monostichis, fusiformibus, utrinque acutatis, rectis, hyalinis, primitus 2 cellularibus et utrinque 2-guttatis, dein 3-septatis et quaque cellula 1-guttata, imprimis medio subconstrictis, 20-24  $\approx$  5-6.

Hab. in Leucaena glauca (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

15. Metasphaeria asparagina Sacc., Nuovo Giorn. Bot. it. N. S. v. XXII, 6458 1915, p. 38. — Peritheciis laxe gregariis, innato-erumpentibus et subsuperficialibus globulosis v. fere truncatis, 170-180 μ diam., poro minuto 17 μ diam., pertusis, duriusculis, nigris; ascis valde crassis, subfusoideis, apice obtuse tenuatis, brevissime stipitatis, 50-52 × 18-19, copiose filiformi-paraphysatis, octosporis; sporidiis medio tristichis, tereti-oblongis, utrinque rotundatis, inaequilateris, 3-4-septatis, ad septa praecipue medium constrictis, 21 × 6, intus minute granulosis, hyalinis.

Hab. in caulibus emortuis Asparagi aphylli (Liliaceae), C. Balzan. et Imghieret et Makluba, Ins. Melita.— Var. smilacina Sacc., l. c. p. 38.— Peritheciis minoribus 80-90  $\mu$  diam. late pertusis; sporidiis  $20 \approx 7-7,2$ , hyalinis.—Hab. in caulibus Smilacis asperae (Liliaceae), Makluba, et Uied. Babu in Ins. Melita.— Socia adest  $Microdiplodia\ smilaoina$ .

16. Metasphaeria Dearnessi Bubák, Hedw. 58. p. 15 (1916).— Maculis utrinque visibilibus, rotundatis, 6-8 mm. in diam., luteis, arescentibus brunneo-marginatis; peritheciis epiphyllis, crebris, gregariis, semi-immersis, globosis, prominulis, 100-150  $\mu$  in diam., parietibus tenuibus, apice conico erumpentibus, atris, contextu fusco, supra crassiore; ascis cylindricis vel cylindrico clavatis, 48-58  $\times$  7,5-9,5, rectis vel curvatis, subsessilibus, apice rotundatis, non incrassatis paraphysibus-filiformibus, 2  $\mu$  latis, obvallatis, octosporis; sporidiis distichis, fusoideis, 13-18  $\times$  2,5-3,5 rectis vel curvatis, hyalinis, 3-septatis.

Hab. in foliis vivis S m i l a c i s a s p e r a e (Liliaceae), London, Ont., Canada, Amer. bor. (J. Dearness).— A Metasphaeria papulosa (Dur. et Mont.) Sacc. ascis sporidiisque minoribus, a M. nervisequa (Wint.) Berl. et Vogl. peritheciis ascisque minoribus fabbrica sporidiorum diversa.

17. Metasphaeria hibiscincola Rehm, Ascomyc. Philipp. V, Leaflets of 6460

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Philipp. Botany, VI (1914) p. 2202. - Peritheciis gregariis, cortici innatis, dein prorumpentibus, globulosis, minute papillulatis, glabris. nitidis, parenchymatice contextis, 150 µ diam.; ascis cylindraceis. paraphysibus filiformibus obvallatis, 150 × 7; sporidiis monostichis, oblongis,  $20-25 \approx 5$ .

Hab, in ramulis emortuis Hibisci rosae-sinensis (Malvaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

18. Metasphaeria pseudostromatica Rehm, Ascomyc. Philipp. VI, Lea- 6461 flets of Philipp. Botany, VI (1914) p. 2262. Peritheciis gregariis, innatis, in ligno dilute nigro-fusco, epidermide immutata tecto sessilibus, mox prorumpentibus, globulosis, minute papillulatis, 0,5 mm. diam., glabris, mox collabentibus, parenchymatice contextis; ascis clavatis, apice rotundatis, 90 × 15, paraphysibus filiformibus immixtis; sporidiis distichis, fusoideis, rectis vel curvulis, 1-mox 3-septatis, ad septa paullulum constrictis, hyalinis, 15-17 × 4-5, interdum strato mucoso 2 µ circ. cr. obductis.

Hab. in ramis emortuis Melastomaceae quaedam, Mt. Banahao, ins. Philipp. (C. F. BAKER).

19. Metasphaeria Urostigmatis Speg., Mycet. Argent. VI, Anal. Mus. 6462 Nac. Buenos Aires XXIII p. 58 (1912). - Maculis pallescentibus, indeterminatis, amphigenis, lineolis subdendriticis fuscis ad epiphyllum saepius notatis; peritheciis plerumque epiphyllis, sparsis vel laxe gregariis, innato-erumpentibus, nigris, subhemisphaericis, 120-150 µ diam., subcarbonaceis,? astomis, basi hyphis paucis, ramulosis, septatis, patentiusculis vel repentibus, 30-100 \* 2-4, olivaceis cinctis, contextu opaco indistincto; ascis cylindraceo-obelavatis, apice crassiuscule tunicatis et obtusissime rotundatis, basi abrupte cuneato-pedicellatis, 40-50 × 10, paraphysibus mucosis subcoalescentibus cinctis; sporidiis distichis, fusoideis, rectis vel leniter inaequilateris, 16-18 \* 4-5, primo hyalinis grosse 4-guttatis, dein diblastibus, serius 3-septatis, non vel vix constrictis, chlorinis.

Hab. in foliis subputrescentibus Urostigmatis quintuplinervis (Moraceae), in silvis prope Puerto Léon, Misiones, Argentina.

20. Metasphaeria incompleta Rehm, Ascom. Philipp. VIII, in Leaflt. 6463 of Philipp. Bot. VIII, 1916, p. 2949 .- Perithecia in maculis epiphyllis suborbicularibus dein saepe confluentibus, dilute albo-fuscidulis nigre marginatis, 0,5-1,5 cm. latis, gregarie innata, globulosa, vix papillulata, demum erumpentia, glabra, atra, parenchymatice

contexta, 0,3-0,5 mm. lata; ascis ovato-clavatis  $30 \times 12$ -15, 8-sporis J. Sporis fusoideis 3-septatis non constrictis, hyalinis, 18-20  $\times$  4-5. Paraphyses conglutinatae.

Hab. ad folia Eugeniae? (Myrtaceae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

21. Metasphaeria conoidea Sacc., Philipp. Journ. of Sc. Manila, P. I, 6464 1921, p. 598. — Peritheciis gregariis, globoso-conicis, erumpentibus, nigris, 0,5 mm. diam., duriusculis, ostiolo subrostellato emergenti; ascis cylindricis, 170-180 × 8-9, octosporis, breviter stipitatis; sporidiis oblique monostichis, oblongo-fusoideis, utrinque acutulis, interdum inaequilateris, 3-septatis, non constrictis, 4-guttatis, 26 × 7, hyalinis.

Hab. in ramis emortuis Psidii guajavae (Myrtaceae), Kwang Si, Tang Uen, Cina (REINKING).

22. Metasphaeria maculans Rehm, Ascom. Philipp. in Ph. Journ. Sc. 6465 VIII p. 401 (1913) et Ascom. Phil. V p. 2202 (1914).— Peritheciis in maculis circularibus intus dilute fuscidulis mox in plagas latas confluentibus, cortice gregarie innatis tectisque, globosis, glabris minute papillulatis, semiglobose prominulis, 200-300 μ d., contextu parenchymatico fusco; ascis clavatis, apice rotundatis in stipitem elongatis, 150 × 18, octosporis; sporidiis elongato-fuscideis, rectis, 1-cellularibus, mox medio septatis, vix constrictis, utraque cellula guttis oleosis magnis praedita, demum 4-cellularibus, hyalinis, 30 × 8-9, distichis; paraphysibus filiformibus.

Hab. ad petiolos emortuos Arengae sacchariferae (Palmae), Los Baños, in ins. Philippinis (Reyes, Baker). — Sporidia nonnulla fuscescentia an ergo Leptosphaeria?. Metasphaeria saccharicola Speg. affinis videtur.

23. Metasphaeria zobeliana Staritz, Verh. Bot. Ver. Brandenb. LV 6466 (1913) p. 76.— Peritheciis immersis, ostiolo erumpentibus, singulis vel in parvos greges collectis; ascis cylindraceis, breviter pedicellatis, apice leniter tenuatis et rotundatis, 90-94 × 8-9; sporidiis irregulariter distichis, hyalinis, 4-6-locularibus, ad septa constrictis, quoque loculo grosse 1-guttulato, rectis vel lenissime curvatis sive inaequilateris, 20-25 × 5-5,5.

Hab. in caulibus emortuis Delphinii elati (Ranunculaceae), prope Dessan, Germania.

24. Metasphaeria bocconeana Sacc., Ann. Mycol. XI, 1913, p. 561, 6467 Nuovo Giorn. Bot. it. N. S. v. XXI, 1914, p. 116. — Peritheciis laxe gregariis, subcutaneo-erumpentibus, globoso-depressis, nigricantibus, 160-190  $\mu$  diam., ostiolo rotundo 16-18  $\mu$  diam. pertusis, contextu atro-fuligineo; ascis saccato-obelavatis sursum tenuatis, brevissime stipitatis, 45-55  $\times$  12, filiformi-paraphysatis, octosporis; sporidiis 2-3-stichis, tereti-oblongis, utrinque rotundatis, typice 4-septatis, grosse 5-guttatis, hyalinis, 15-16  $\times$  4,5-5, loculis binis inferioribus paullo angustioribus.

Hab. in ramulis emortuis Rhamni Alaterni (Rhamnaceae), Boschetto (Insula Melita) (Doct. Borg). — Socia adest Arthonia dispersa. — Affinis Met. corticolae, Met. Sambuci etc.

25. Metasphaeria crebra Sacc., Ann. Mycolog. XI, 1913, p. 15.— Pe. 6468 ritheciis hypophyllis, late creberrime gregariis et maculas fumosas varias efficientibus, punctiformibus, subcuticularibus mox emergentibus 90-100 μ diam., poro pertusis, contextu parenchymatico fuligineo; ascis... jam resorptis; sporidiis tereti-fusoideis, utrinque obtusulis, rectis curvulisve, 4-septatis, rarius 3-6-septatis, ad septa leviter constrictis, 22-24 × 6, hyalinis, dein dilutissime flavidis, loculis saepe 1-guttulatis.

Hab. in foliis languidis Amygdali Persicae (Rosaceae), Kawauye-mura, Japoniae (K. HARA, comm. H. Sydow).— Ascis non visis, sed sporidia interdum bina parallele juncta forte indicant ascum.

26. Metasphaeria Kerriae Sydow et Hara in Sydow, Annales My-6469 colog. X, 1012, p. 407. — Peritheciis in maculis effusis griseotinctis densiuscule aequaliterque distributis globulosis, 150-180 μ diam., atris, immersis, ostiolo papilliformi tantum erumpente, contextu opaco indistincto; ascis clavatis, apice rotundatis, 80-100 × 16-20, octosporis, breviter pedicellatis; sporidiis distichis, oblongis, utrinque rotundatis, 2-septatis non constrictis, hyalinis, intus guttulatis, hyalinis; paraphysibus filiformibus.

Hab. in ramis Kerriae japonicae (Rosaceae), pr. Mino, Kawauye-mura, Japonia (K. HARA).

27. Metasphaeria piricola Sacc., Nuovo Giorn. Bot. it. N. S. v. XXII, 6470 1915, p. 37.— Peritheciis gregariis, depresse globosis, subcutaneo-erumpentibus, 250-300 μ diam., nigris, contextu denso atrofuligineo, ostiolo circulari 24 μ diam.; ascis crasse oblongo-clavatis apice rotundatis, subsessilibus, 80-90 × 14-15, filiformi-paraphysatis, octosporis; sporidiis distichis v. oblique 1-stichis, oblongo-cylindraceis, utrinque rotundatis, 3-rarius 4-septatis, ad septa praecipue medium valde constrictis, saepius inaequilateris, hyalinis, 4-guttatis v. granulosis, 21 × 7-7,5, loculis 2-3 superioribus crassioribus.

Hab. in ramulis emortuis Piri communis fm. silvestris (Rosaceae), Uied Incita, Insula Melita. — Var. Periplocae Sacc., l. c. p. 37. — Sporidiis paullo longioribus,  $23-24 \times 7-7,5$ . In ramis Periplocae levigatae (Asclepiadaceae), Uied Babu, Ins. Melita. — Var. Jasmini Sacc., l. c. p. 38. — Sporidiis  $20 \times 7$ . In ramis emortuis Jasmini azorici (Oleaceae), S. Antonio, Ins. Melita (G. Borg).

28. Metasphaeria sepincola (B. et B.) Sacc. — Syll. IX p. 856, an? Syll. II 6471 p. 164. — fm. monosticha Gz. Frag., Trab. Mus. Nac. Ciencias Nat., ser. Bot. n. 4, p. 14 extr., fig. 5. — Ascis cylindraceis usque ad 110 × 10, paraphysibus simplicibus, raro ramosis, copiose obvallatis; sporidiis monostichis, oblongis, rectis, hyalinis, 3-4-septatis, non constrictis, loculis minute 1-guttulatis, 20 × 8.

Hub. in ramis Rosae caninae var. (= R. dumetorum) (Rosaceae), in montibus Carpetanis, Hispania. — Affinis M. lejostegae (Ell.) Sacc., sed probabiliter ut species nova habenda.

29. Metasphaeria Macounii Dearn., Mycologia, 8., 1916, p. 100.— Peritheciis nigricantibus, sparsis, basi applanatis, globoso-conicis, ligno semiimmersis, interdum ostiolo obtuso tantum revelatis; areis latis dealbatis ligni decorticati atropunctatis, 0,5-0,7 mm. diam.; ascis cylindraceis, 135-170 × 7, copiose paraphysatis; sporidiis stricte 1-seriatis utrinque rotundatis, 16-22 × 6-7, plasmate 3-partito.

Hab. in ramis decorticatis, emortuis Rosae sp. silvaticae (Rosaceae), in Ins. Vancouver, Columbia (J. MACOUN).

30. Metasphaeria bifoveolata Spegaz., Fungi Costaric. nonn. in Bol. Ac. 6473 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 197. — Maculae orbiculares depressae pallide rufescentes indeterminatae; 2-10 mm. diam. perithecia laxe gregaria subepidermica, hemisphaerico-lenticularia, minuta atra glabra, ostiolata, non umbonata, coriacella, contextu parenchymatico parum distincto; asci e cylindraceo subfusoidei, superne subtruncato-rotundati ibique semper et longiuscule vacui lumine apicali eximie bifoveolata, deorsum attenuati ac in pedicello crasso brevissimo noduloso producti, paraphysibus parcis filiformibus commixti 8-spori, 60 × 8-10; sporae subfusoideae 5-septatae, utrinque acutiusculae, ad septum medium non v. vix constrictae, hyalinae, 20-25 × 5.

Hab. ad fructos vivos submaturos Coffeae sp. (Rubiaceae), in agris prope Tuis, Costarica, America trop.

31. Metasphaeria stromaticola A. Maublanc, Bull. Soc. Mycol. de Fr., 6474 XXXVI, 1920, p. 34, tab. II fig. 8-11. — Mycelio gracili, hyalino

v. fuscidulo in stromatibus *Phyllachorae* (duplieis?) evoluto. Peritheciis in eisdem stromatibus immersis, globulosis, circ. 200  $\mu$  diam. tunica sat tenui ostioloque non prominulo praeditis; ascis cylindraceis, breviter pedicellatis, 8-sp. 100-120  $\approx$  15-20, paraphysibus filiformibus dense obvallatis; sporidiis distichis, fusoideis v. fusoideo-clavatis, rectis v. vix curvulis, 3-septatis, ad septa (praecipue medio) constrictis, loculis mediis inflatis et subglobosis, ultimis angustioribus obtusisque, hyalinis v. chlorinis, strato mucoso praeditis, 28-35  $\approx$  7-9. — Adsunt spermogonia pycnidiaque peritheciis similia; spermatiis minutissimis, 4-6  $\mu$  longis, ellipsoideis, guttulatis; stylosporis cylindraceis, obtusis, rectis, 3-septatis, primo dense granulosis, dein grosse 4-guttulatis, hyalinis v. chlorinis, brevissime pedicellatis, 25-32  $\approx$  4-5.

Hab. in foliis petiolisque S a p i n d a c e a e cujusdam, para sitans stromata Phyllachorae sp. (cfr. Ph. duplex), Rio de Janeiro: Jacarepagua, Brasiliae (Britto, Herb. Mus. R. Jan.).

32. Metasphaeria Dulcamarae Massa, Annali di Botanica v. X, 1912, 6475 p. 421, tab. IV fig. 2. — Peritheciis gregariis erumpentibus, quandoque secundum rimas epidermidis lineariter dispositis, atris, sphaericis; ascis numerosis clavatis 75 × 12, paraphysibus filiformibus, basi attenuatis, sporidiis parum curvulis, 3-septatis, ad septa leniter constrictis, 27 × 5, hyalinis.

Hab. in ramulis Solani Dulcamarae (Solanaceae), Vercelli, Italia bor. (CESATI 1852).

33. Metasphaeria Staphyleae Dearness et House, N. York St. Mus. Bull. 6476 n. 188, p. 34 (1916).— Peritheciis sparsis epidermidem elevantibus, pallidis, pustulatim erumpentibus, e lenticularibus subglobosis, 180-360 μ cr.; ostiolo cylindrico, brevi, obtuso; ascis clavato-cylindraceis, saepe medio latioribus, 75-90 × 8-15, quandoque stipitatis; paraphysibus obscuris, quandoque demum collabescentibus; sporidiis hyalinis, ellipsoideis, triseptatis, irregulariter monostichis, medio v. ad apicem saepe distichis magnitudine variabilibus, 15-22 × 5-8.

Hab. in ramis emortuis Staphyleae trifoliatae (Staphyleaceae), West Park Ulster County, prope Jamesville, Onondago Co. N. Y., Amer. bor. (H. D. House).

34. Metasphaeria Theobromae E. Sous. da Camara, Myc. novi mycofl. 6477 azor. et afric., in Revista agronom. Lisboa 1920, Extr. p. 3 tab. II fig. 1-3.— Peritheciis plerumque sparsis vel raro gregariis, immersis, sublenticularibus, atris, ostiolo pertusis denique erumpentibus,

 $420 \times 150-300$ ; ascis cylindraceis, saepe arcuatis interdumque rectis, apice rotundatis, subsessilibus, achrois, octosporis,  $90-120 \times 7-10$ ; paraphysibus copiosissimis, filiformibus, ascos superantibus; sporidiis monostichis fusiformibus vel oblongo-ellipsoideis, utrinque attenuatis, primo medio diu uni-demumque quator-septatis, parum distinctis (an 5 %), constrictulis, hyalinis subchlorinisve,  $22-28 \times 6-8$ .

Hab. in ramulis Theobromae Cacao L. (Sterculiaceae), Sancti Thomensis insula (leg. Dr. Armando de Seabra).

35. Metasphaeria consociata Rehm, Ascomyc. Philipp. V, Leaflets of 6478 Philipp. Botany, VI (1914) p. 2201. — Hypostromate nigritulo ramulos ambiente; peritheciis innatis, sparsis, singularibus vel 2-3-congregatis, corticem protuberantibus, dein plerumque quadrifide perforantibus, conoideis, ostiolo vix conspicuo praeditis, nigris, glabris, 120 μ latis, parenchymatice contextis; ascis fusiformi-cylindraceis, aparaphysatis, octosporis, 120 × 8-9; sporidiis 1-2-stichis, oblongis, rectis, 3-septatis non constrictis, hyalinis, 20 × 4.

Hab. in caulibus emortuis, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. Reyes).— Dubium an potius ad Dothideaceas (? Montagnella) adscribenda species.

- CHAETOPYRENA Sacc.— Syll. p. 184 (ut subg.) Speg., Myc. Arg. VI p. 56 (1912). Est Metasphaeria peritheciis setulosis et huc non-nullae Metasphaeriae species transferendae sunt: Chaetopyrena Poae (Niessl), Ch. Cerletti (Speg.), Ch. chaetostoma Sacc., Ch. trichostoma (Pass.), Ch. Origani (Mont.), Ch. culmicola Sacc. (Met. graminum var. culmicola Sacc.), Ch. Taquarae (Starb.) (M. culmifida var. Taquarae Starb.). Conferendae hae species in Sylloge, inter Metasphaerias.
- 1. Chaetopyrena xerophila Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6479 Buenos Aires, XXIII p. 56 (1912).— Peritheciis sparsis, erumpentibus, primo tectis dein, epidermide secessa, nudatis et subsuperficialibus, globoso-depressis, 200-250 μ diam., coriaceis, vix papillulatis, ostiolo setulis cylindraceis, atris, apice pellucidis, subrectis, 50-60 × 3-4, penicillato-barbatis, contextu indistincto; ascis clavulatis, brevissime pedicellatis, 100-120 × 20-22, dense filiformi-paraphysatis; sporidiis ellipsoideo-fusoideis, rectis vel lenissime subinaequilateris, 30 × 12, 5-septato-constrictis, subtorulosic, hyalinis, loculis grosse 1-3-guttulatis, primo tunica mucosa tenui vestitis dein nudis.

Hab. in culmis vaginisque aridis Scleropogonis brevifolii (Graminaceae), in aridissimis Potrerillos, prope Mendoza, Argentina.

## CERIOSPORELLA Berl. - Syll. XIV p. 19, XVII p. 704.

1. Ceriosporella gallica Sacc., Notae Myc. XXII (R. Acc. Pad. 1917) 648 p. 161.— Peritheciis dense gregariis subcutaneis, globoso-depressis, 0,5-0,7 mm. diam., epidermide nitida, leviter supra perithecium atrata tectis et vix ostiolo brevi obtuso erumpentibus; contextu indistincte celluloso, membranaceo-molliusculo, fuligineo; ascis anguste tereti-fusoideis, 120-140 × 6-7,5, brevissime tenuato-pedicellatis, summo apice obtusulis, octosporis, non v. obsolete paraphysatis; sporidiis oblique monostichis v. arcte distichis, fusiformibus, utrinque cuspidatis, 23 × 3,6, indistincte 3-4-septatis, non constrictis, polyblastis v. minute guttulatis, hyalinis (maturis?).

Hab. in ramis minoribus morientibus Carpini Betuli (Betulaceae), Rigny, Gallia (FLAGEOLET). — In mentem revocat Anthostomellam nitidulam cujus forsan status juvenilis; verum nimis differt.

2. Ceriosporella Polygoni A. L. Smith et J. Ramsbottom, Trans. Brit. 6481 Mycol. Soc. IV, pt. II, 1913. p. 325 (1914).— Peritheciis confertis, numerosis, atris, carbonaceis, membranaceis, depresso-globosis, 600 μ circ. diam., sub epidermide insidentibus, ostiolo tantum erumpentibus; ascis cylindraceo-clavatis, apice obtuse rotundatis, basi attenuatis, 35-45 × 4-5, octosporis, aparaphysatis; sporidiis oblique subdistichis, fusiformibus, utrinque mucronatis, 9-12 × 2, mucronibus 4 μ longis, primum 3-4-guttulatis, dein medio 1-septatis, hyalinis. Hab. in caulibus siccis Polygoni amphibii var. ter-

restris (Polygonaceae), Ardrossam, Ayrshire, Britannia (D. A. Boyd).

MASSARINA Sacc. — Syll. II p. 153, IX p. 824, XI p. 332, XIV p. 586, XVI p. 535, XXII p. 202.

1. Massarina nigro-viridula Rehm, Ascomyc. Philipp. VI, Leaflets of 6482 Philipp. Botany, VI (1914) p. 2263. — Peritheciis cortici extus late nigro-viridulo gregarie innatis et obtectis eumque hemisphaerice protuberantibus, globulosis, atris, minutissime papillulatis, 1 mm. diam., subcarbonaceis; ascis cylindraceis, apice rotundatis, 150 × 10, filiformi-paraphysatis, J-; sporidiis ellipsoideis, 3-septatis, cellulis mediis transverse ellipticis, non constrictis, hyalinis, strato mucoso carentibus (mensuris desunt).

Hab. in ramo Derridis ellipticae (Leguminosae), Los Baños, ins. Philipp. (C. F. BAKER).

2. Massarina Pomacearum v. Höhn., Ann. Mycol. 15., 1917, p. 381; 648

Ber. deutsch. bot. Ges. 35., 1917, p. 252. — Peritheciis subrotundis,  $500\text{-}550 \times 300\text{-}350$ , saepe paucis concrescentibus, sub peridermio nidulantibus, dense gregariis, peridermium pustulatim elevantibus et osticlo non eminenti perforantibus; contextu lateraliter 32  $\mu$  crasso; ascis clavatis, apice rotundatis, vix stipitatis, crasse tunicatis,  $144\text{-}170 \times 21\text{-}24$ , paraphysibus multo longioribus filiformibus obvallatis; sporidiis superne distichis oblongo-fusoideis, hyalinis, 4-cellularibus, medio leviter constrictis, grosse 4-guttatis, strato mucoso crasso obvolutis,  $30\text{-}39 \times 11\text{-}13$  (sine strato mucoso), cellulis binis superioribus paullo crassioribus, extimis subhemisphaericis.

Hab. in ramis Crataegi monogynae (Rosaceae), prov. Tullnerbach, Wienerwald, Austria (v. Höhnel). — Mass. eburneae, M. eburnoidi et M. Corni proxima.

3. Massarina Raimundoi Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2263. — Peritheciis longe lateque plurimis cortici innatis eumque protuberantibus et papillula parvula perforantibus, globulosis, 400  $\mu$  diam., ad basim hyphis nonnullis fuscidulis ramosis obsessis, parenchymatice contextis, nigris; ascis cylindraceis, rotundatis, 220  $\mu$  usque altis, 12  $\mu$  crassis, J-, paraphysibus filiformibus 2  $\mu$  cr. obvallatis; sporidiis monostichis, cylindraceis, utrinque applanatis, 4-cellularibus, cellulis elliptico-transversim nucleatis, rectis, hyalinis, 20  $\times$  10, strato mucoso non obductis.

Hab. in ramis Citri nobilis (Rutaceae), Los Baños, ins. Philipp. (M. B. RAIMUNDO).— Sporarum indole ad Massariam accedit sed defectu strati mucosi imprimis a Massaria et Massarina divergit; forsitam melius generis novi pars.

## **SACCARDOELLA** Speg. — Syll. II p. 190, XI p. 336, XIV p. 586.

1. Saccardoella montellica Spegazzini. — Syll. II, 191. — var. Rubi J. 6485 E. Chenantais, Bull. Soc. Mycol. de Fr. XXXV, 1919, p. 126, fig. 20. — Peritheciis 0,4-0,6 mm. cortice teetis, ovato-sphaeroideis, aggregatis paucis, circinnantibus, atro-carbonaceis, rugulosis; ostiolis quandoque crassis vix exsertis, perithecium dimidium aequantibus, per cuticulam fissam erumpentibus, ligno adnatis; ascis cylindraceo-clavatis 100-120 × 15-16, stipitatis, paraphysibus filiformibus guttulatis obvallatis; sporidiis distichis longe fusoideis, utrinque acutis vel in loculum desinentibus, ad septa vix constrictis, 12-14 septatis, loculis 2-3 guttulatis, hyalinis, 60-70 × 8.

Hab. in corticibus Ruborum vetustis (Rosaceae), Pont-du-Cens, Chêne vert, propé Nantes Loire-inferieure, Gallia.

## **SYDOWIA** Bres. — Syll. XI p. 341, XVI p. 536.

1. Sydowia gregaria Bresadola.— Syll. XI, p. 341.— Ann. Mycol. 18., 6486 1920, p. 64 (diagn. nova et completa).— Peritheciis in caespitulis dense gregariis, <sup>1</sup>/<sub>3</sub>-0,5 mm. latis, congestis, in cortice nidulantibus et erumpentibus, raro simplicibus, subglobosis, 300-400 × 250-350, subiculo atro, subcutaneo, ex hyphis luteo-fuscis, ramoso-septatis, 5-7 μ latis composito, insidentibus; ascis cylindraceo-subclavatis, crasse tunicatis; breviter stipitatis, 20-26-sporis, 130-150 × 14-20 jodo non caerulescentibus; sporidiis distichis vel conglomeratis, clavato-subfusiformibus, hyalinis, 3-septatis, ad septum medium constrictis, 15-20 × 6.

**ZIGNOELLA** Sace. — Syll. II p. 214, IX p. 860, XI p. 339, XIV p. 587, XVI p. 536, XVII p. 709, XXII p. 203.

1. Zignoella algaphila H. L. Stevens, Bot. Gazette 69., 1920, p. 256.— 6487 Mycelium tenue e pallido brunneo in contextu matricis repente; peritheciis nigris varie conformatis sed plerumque phyalaeformibus collo usque 24 μ cr. praeditis, basi parum dilatatis, 90 × 170-180, superficie crebre reticulata sed non pilosa, basi tantum ob mycelio tomentosula; ascis copiosis cylindraceis, octosporis, 71 × 7; paraphysibus tenuibus filiformibus; sporidiis hyalinis utrinque acutatis 3-septatis, 17-21 × 3,5.

Hab. in thallo Cephaleuri virescentis et Artocarpi incisi (Algae), Mayaguez, Porto Rico, Amer. Centr.

2. Zignoella duvauicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6488 Buenos Aires XXIII, p. 55 (1912).— Peritheciis in ligno denudato cinerascente superficialibus, Iaxiuscule gregariis, pusillis, glabris, udis globosis, 90-120  $\mu$  diam., siecis corrugato-collapsis, atris, ostiolo umbilicato latissimo, 15-20  $\mu$  diam., tenue membranaceis, contextu grosse parenchymatico, pellucido, fuligineo; ascis subellipticis, breviter crasseque noduloso-pedicellatis, paraphysibus paucis commixtis (mensurae desunt); sporidiis subcylindraceis vel lenissime ovatis, 3-septatis, ad septa leniter constrictis, hyalinis, eguttulatis,  $16\text{-}20 \approx 7\text{-}9$ , loculo medio supero saepius nonnihil tumidiore.

Hab. in ramis dejectis decorticatis Duvauae longifoliae (Anacardiaceae), prope Huillapima, Catamarca, Argentina.

3. Zignoella subtilissima Rehm in Strasser, Ann. Mycol. IX, 1911, p. 648

81. - Peritheciis dispersis, primitus cortici immersis mox emergentibus et sessilibus, conoideis, distincte cylindraceo-papillulatis. nigris, glabris, 0,15 mm. diam.; ascis clavatis 70-75 × 8-9, 8 sporis; sporis fusiformibus, rectis, primitus medio septatis, utrinque 2-3-guttatis, tenue 3-septatis, quaque cellula 1-guttata, hyalinis, 18-20 × 3,5-4, fere monostichis; paraphysibus subramosis, tenuibus.

Hab. ad ramulum exsiccatum Hederae Helicis (Araliaceae), Hollenstein, Austriae inf. (STRASSER). - Zign. macrascae Sacc. proxima.

4. Zignoella somala Baccarini, Eumyc. Somalia it., in « Missione Ste- 6490 fanini-Paoli » Firenze 1916, p. 196 (Trematostoma). — Peritheciis atris ad 0,5 mm. latis, 1/4 mm. altis, semiinnatis, obtusis; ostiolo obconico dein papilla amissa, late perforantibus, gregariis ac saepe confluentibus, corticicolis; ascis elongatis, paraphysibus longioribus obvallatis, 122 × 12; sporis ellipticis triseptatis ad septa non constrictis; articulis guttulatis hyalinis,  $18 \approx (5-6)$ .

Hab. ad corticem arboris ignoti Somalia it., Africa trop. (PAOLI). var. Calancalli Baccarini, l. c., peritheciis dense gregariis, mammillosis, 350 µ latis, atris, angulosis, papillatis, dein papilla amissa late circulariter perforatis; osculo albicante; ascis clavatis 95-105 \* 12-15; sporidiis oblique monostichis (20-22 \* 7-8) fusoideis, triseptatis. - Hab. ad ramos Bosciae somalensis (Capparidaceae), vulgo « Calancáll » inter Gololónle et Uenéio, Somalia it., Africae trop. (PAOLI).

5. Zignoella Roripae Rehm, Ann. Mycol. XIII, 1915, p. 4 .- Perithe- 6491 cia dispersa, primitus innata, dein prorumpentia, globulosa, minutissime papillulata, nigra, glabra, 0,5 mm. lata, non carbonacea; asci subfusiformes, sessiles, 80-100 \* 10-14, 8-spori; sporae cylindraceae, utringue acutatae, rectae, 5-septatae, cellulis omnibus 1magniguttatis, medio non constrictae, hyalinae, demum dilute flavidulae, -35 \* 5, distichae. Paraphyses filiformes.

Hab. ramulos Roripae (Cruciferae), Kulm N. Dak., Amer. bor. (Brenkle).

6. Zignoella Arengae Rehm, Ascomyc. Philipp. IV, Leaflets of Phi- 6492 lipp. Botany VI (1913) p. 1938. — Peritheciis in maculis corticis late dealbatis gregarie innatis, mox emergentibus modo ad basim innatis, conoideis, non papillulatis, poro perspicuo pertusis, glabris, atris, carbonaceis, 0,4-0,5 mm. diam.; ascis clavatis, apice rotundatis, crasse tunicatis, 130 × 20; paraphysibus filiformibus obvallatis; sporidiis distichis, fusiformibus, utrinque acutatis, transverse

3-septatis, medio constrictis, quaque cellula 1-guttata, hyalinis,  $25 \times 7-8$ .

Hab. in petiolis emortuis Arengae mindorensis (Palmae), Luzon Prov. Laguna, Los Baños ins. Philipp. (N. G. Teodoro). — Propter excipulum carbonaceum ad Metasphaerium non pertinet.

7. Zignoella senegalensis Speg., Anal. Mus. Nac. Buenos Aires, XXVI 6493 p. 124 (1914). — Matrice late sordideque infuscata; peritheciis hinc inde laxe consociatis e globoso depressis, 140·190 μ diam., usque ad medium insculptis, non vel vix papillulato ostiolatis, carbonaceis, atris, glabris, levibus, opacis, contextu indistincto; ascis obclavatis, pedicello brevissimo, crasso, noduloso fultis, 100 × 20, paraphysibus filiformibus, crassiusculis, conspicue longioribus obvallatis; sporidiis oblique vel recte distichis, cylindraceo-fusoideis, 22-23 × 7-8, saepius 3-septatis, ad septum medium excentricum valide constrictis, loculo primario superiore conspicue longiore et crassiore, loculis omnibus 1-guttulatis, hyalinis.

Hab. in spathis vetustis subputrescentibus adhuc pendulis Phoenicis cujusdam (Palmae), prope Daccar, Senegal.

8. Zignoella Platani Rehm, Ann. Mycol. XI, 1913, p. 151 (Zignoina).— 6494 Peritheciis in cortice hinc inde denigrato gregariis, basi innatis; conoideis, vix papillulatis poro perspicue pertusis, glabris, atris, 0,15 mm. lat.; ascis fusoideis, sessilibus, 65-70 × 10-12, octosporis, sporis fusoideis, ntrinque acutatis, rectis 1-cellularibus, intus granulosis, hyalinis, 18-20 × 4-5, distichis; paraphysibus filiformibus, hyalinis, 2 μ er. Excipulum crassum fuscum.

Hab. ad corticem solutum Platani (Platanaceae), prope balneum Brückenau (Rhön), Europa media (ADE). — Z. grönendalensi S. B. R. nec non Wallrothiellae melanostigmoidis Feltg. proxima.

9. Zignoella lortoniana Sacc., Notae Myc. XIV, Ann. Mycol. 10., 1912, 6495 p. 310. — Peritheciis initio subcutaneis sed mox erumpentibus, saepius hine inde caespitulosis, globulosis v. ovoideis, nigris, 200-300 μ diam., ostiolo obtuso vix papillatis, senio subinde subdepressis; contextu crasso, nigricante, obscure celluloso non omnino earbonaceo; ascis fusoideo-clavatis deorsum sensim tenuato-stipitatis, 100 × 12-14, apice tenuatis sed truncatis, paraphysibus confertissimis, filiformibus, guttulatis, hyalinis, 2-2,5 μ cr. obvallatis; sporidiis distichis tereti-fusoideis, utrinque obtusatis, rectis v. leviter inaequilateris strato mucoso angustissimo obductis, creberrime (20-25-) septulatis, non constrictis, loculis angustissimis transverse minute

fere cribroso-guttulatis, septis subternis remotis ceteris evidentioribus praeditis, subhyalinis, 33-35 × 7-8, senio contractis, vix 26-28 \$ 5.5.5 septisque omnibus manifestissimis et guttulatis evanescentibus.

Hab, ad ramos corticatos emortuos Crataegi Oxyacanthae (Rosaceae), Clessis prope Rigny Galliae (legit ab. LORTON, comm. ab. Flageolet). - Nonnullis notis cum gen. Saccardoella convenit sed sporidia mutica et perithecia subsuperficialia: a Ziquoella typica quoque aliquid desciscit, tamen proximior videtur.

10. Zignoella Rubi Noelli, Nuovo Giorn. bot. it. v. XXIV. 1917, n. 6496 3, p. 192. — Peritheciis minutis vix pertusis, gregariis, superficialibus, sparsis vel confertis, papillatis, aterrimis, nitidis, ovoideis, glabris, 190-210 u latis; ascis clavatis, 70-75 × 10-17, octosporis, paraphysatis; sporidiis distichis, fusoideo-oblongatis, rectis vel curvulis, dilute-luteis, 3-septatis, ad septum parum vel non constrictis, 25-39 \* 7-10, paraphysibus filiformibus.

Hab. in sarmentis putrescentibus Rubi fruticosi (Rosaceae), prope Augustam Taurinorum, Pedemontium, Italia bor. -Z. ovoideae Fr. proxima sed colore septatione magnitudine sporarum satis diversa.

11. Zignoella nobilis Rehm, Ascom. Philipp. VIII, in Leaflt. of Phi- 6497 lipp. Bot. VIII, 1916, p. 2950 (Trematostoma). -- Perithecia arcte gregaria, latas plagas formantia, sessilia, conoidea, vix papillulata, potius umbilicata, poro pertusa, atra, glabra, subcarbonacea, 0,5 mm. lata; ascis clavatis, apice rotundatis, 80-85 × 12, 8-sporis, J-; sporis oblongo-fusiformibus rectis, primitus 4-guttatis, dein 3-septatis, quaque cellula 1-magniguttata, non constrictis, hyalinis, 15. 18 × 5, distichis. Paraphyses filiformes.

Hab. ad ramum emortuum corticatum Citri nobilis (Rutaceae), Los Baños, Ins. Philipp. (C. F. BAKER).

12. Zignoella gallica Sacc. et Flag. in Sacc., Notae Myc. XX, Nuovo 6498 Giorn. bot, it. 23., 1916, p. 222. — Peritheciis sparsis, basi applanata ligno adnatis, superficialibus, globoso-hemisphaericis, brevissime conico-papillatis, subcarbonaceis, nigris, 250 g diam. contextu dense et minute celluloso, fuligineo; ascis cylindraceis, apice obtusatis, 140-160 \( 7.5-8.5 \), brevissime tenuato-stipitatis, filiformiparaphysatis, 6-8-sporis; sporidiis oblique monostichis, oblongofusoideis, saepius leviter curvis, utrinque plus v. minus rotundatis, 3-5-septatis, 6-guttalatis, ad septum medium non v. vix constrictis,  $19.20 \approx 5.7-6$ , hyalinis.

Hab. in ligno putrescente, saepe superficie atrato, Populi nigrae (Salicaceae), Rigny, Galliae (FLAGEOLET).— Videtur affinis Zign. prorumpenti et Zign. eutypoidi.

13. Zignoella insueta J. E. Chenantais, Bull. Soc. Mycol. de Fr., XXXV, 6499 1919, p. 121, fig. 16. — Peritheciis laxe gregariis, ligno adnatis, 3-400 μ, sphaeroideis, acutis nigris, rugulosis, carbonaceo-membranaceis, poro pertusis; nucleo albo adhaerente (peritheciis senioribus); ascis paucis arcuatis, 2-8 sporis, cylindraceo-clavatis, 80-90 × 20, paraphysibus coalescentibus obvallatis; sporidiis mono-vel distichis, lanceolatis, deorsum attenuatis, grosse multiguttulatis, primum 1-septato-constrictis, loculo superiore majore, inferiore sensim attenuato, dein 2-septatis, granulosis, hyalinis, septo secundo in majore loculo saepe passim aberrante, 40-55 × 10-13.

Hab. in ligno Tiliae (Tiliaceae), exsiccato, Bagatelle, prope Morlaix (Finistere), Gallia.

14. Zignoella lentzkeana W. Kirschst., Krypt. Fl. Brandenb. VII, p. 6500 239 (1911). — Peritheciis superficialibus in parvos greges laxe vel dense gregariis, sphaeroideis vel sursum attenuatis et subpiriformibus, breviter acuteque ostiolatis, 400-500 μ diam.; excipulo atro, carbonaceo, fragili, granuloso-asperulo; ascis clavatis vel clavato-ellipsoideis, in pedicellum brevem gradatim attenuatis, sursum rotundatis incrassatisque, octosporis, 110-150 × 16-22, paraphysibus copiosis, filiformibus, simplicibus, 2 μ crassis, ascos subaequantibus obvallatis; sporidiis sursum irregulariter distichis, deorsum monostichis, ellipsoideis, utrinque late rotundatis, eguttulatis, hyalinis, initio 2-locularibus dein 4-cellularibus, ad septa, praecipue ad septum medianum, constrictis, 24-34 × 9-12.

Hab. in cortice vivo Ulmi (Ulmaceae), prope Fehrbellin, Germania. — Adsunt pycnidia globosa 150-200  $\mu$  diam., coriacea, sporulis ellipsoideis, hyalinis, indistincte 2-cellularibus, 3-4  $\approx$  2 repletis, probabiliter cum Zignoella metagenetice conjuncta.

15. Zignoella torpedo Theiss., Ann. Mycol. X, 1912, p. 10, cum icon.— 6501 Theissen, Decad. Fl. Bras. n. 232. — Peritheciis superficialibus, dense botryose aggregatis et basi stromate compacto iunctis, acervulos irregulares v. strata plus minusve extensa formantibus, elongato-ellipsoideis, vertice paullo attenuatis, 1-2 mm. altis 0,5 mm. latis (ipsa perithecii cavitate ca. 800 × 425), contextu molliusculo, atro, e cellulis polygoniis crasse membranaceis castaneo-brunneis parenchymatice contextis; vertice minute papillato, superficie nigra, opaca, sub lente minute asperula; ascis longissime pedicellatis, cy-

lindraceis (v. sporis polystiche dispositis clavato-ventricosis), p. sp. 145-200  $\times$  25-32 (40), pedicello sensim attenuato usque 280  $\mu$  longo, dilutissimo; sporis 2-(3) - stichis, hyalino-viridulis, oblongis, 42-52  $\times$  12-16, utrinque rotundatis, leniter curvatis, saepius infra clavato-incrassatis, primo continuis, gutta permagna et tunica mucosa praeditis, dein 2 (-4  $^{4}$ ) cellularibus; paraphysibus copiosissimis, dilutis, ubere guttatis, 25  $\mu$  cr., longissimis, flexuosis.

Hab. ad corticem, Lageado, Rio Grande do Sul, Brasilia (RICK).

MELOMASTIA Nits. et Fuck. — Syll. II p. 213, XVII p. 707, XXII p. 206.

1. Melomastia jaapiana Kirschst., Krypt. Fl. Brandenb. VII p. 259 6502 (1911).— M. lignicola Kirschst.— Syll. XXII p. 207 (nomen). — Peritheciis plus minusve gregariis, primo immersis dein subsuperficialibus, sphaeroideis, ostiolo applanato albo-marginato, 300-350 μ diam.; excipulo initio brunneo-consperso dein nudo, atro, coriaceo; ascis cylindraceo-clavatis, in pedicellum attenuatis, sursum rotundatis, 70-90 \* 6-9, octosporis, paraphysibus filiformibus copiosis ascos superantibus; sporidiis oblique monostichis vel distichis, elongato fusoideis, 4-guttulatis, medio constrictis, rectis, interdum dimidiis subinaequalibus, strato tenui mucoso facile evanido cinctis, demum plasmate 4-partito, 16-20 \* 4-5.

Hab. in ramis decorticatis Betulae (Betulaceae), Triglitz, Germania (JAAP). — Affinis M. corticolae et M. subferrugineae sed facile distinguenda.

- Melomastia pallidispora Kirscht., Kryptog. Fl. Brandenb. VII, p. 6503
   259 (1911).— Ita vocanda Trematosphaeria pallidispora Kirschst.—
   Syll. XXII p. 247.
- WINTERINA Sacc. em. Syll. IX p. 909, XIV p. 589 XVI p. 538, XVII p. 708, XXII p. 207. Cfr. Syll. XIV p. 589 (non p. 19!), ubi explicatur et definitur species hyalophragmiae ad Winterinam et hyalodictyae ad Winteriam esse ducendae (cnfr. etiam Syll. XXII p. 256).
- Winterina rigidula Sacc., Notae Myc. XXIII p. 65 (Acc. Venetotrent. 1917) (sub Winteria).— Peritheciis hinc inde maculiformiter dense gregariis, opace nigris, omnino superficialibus, e globoso verticaliter oblongulis, 180-200 μ alt., levissime rugulosis, non collabentibus, ostiolo vix papillato, 20-30 μ diam., contextu indistincte celluloso, crassiusculo, fuligineo; ascis fusiformibus, utrinque acutis,

 $95-100 \times 11,5-12$ , subinde inaequilateris, octosporis, aparaphysatis, 6-8 sporis, interdum 4-sporis; sporidiis distichis, fusiformibus, curvatis, utrinque acutis, initio farctis v. guttulatis, demum 7-9 cuboideo nucleatis, non constrictis,  $55-60 \times 4,7$ , hyalinis.

Hab. in culmis emortuis Bambusae vulgaris (Graminaceae), Los Baños, Ins. Philipp.— Valde affinis W. oxysporae a qua peritheciis rigidis nec umbilicato collabentibus, verticaliter oblongulis, tenuissime rugulosis et dense confertis distinguitur.

2. Winterina profusa (Syd. et Butl.) Sacc., Rehmiomyces profusus Syd. 6505 et Butl., Ann. Mycol. IX, 1911, p. 404. — Peritheciis superficialibus, dense aggregatis et plagulas plus minusve elongatas ramos saepe omnino ambientes formantibus, atris, opacis, subglobosis, inferne contractis et quasi stipite crasso matrici affixis, 200-300 μ diam., coriaceo-carbonaceis, molliusculis, minute papillatis, rugulosis, tandem plerumque collabescentibus, basi hinc inde hyphis fuscis cinctis, contextu griseo-brunneo ex cellulis 9-14 μ diam. composito; ascis cylindraceis, sessilibus, 35-60 × 7,5-12, octosporis; paraphysibus simplicibus, hyalinis, numerosis, late filiformibus, ascorum longitudine; sporidiis oblique monostichis usque distichis, late fusoideis, medio 1-septatis et constrictis, hyalinis, guttulatis, 12,5-17,5 × 5-6.

Hab. in ramis emortuis Cajani in dici (Leguminosae), Dehra Dun, Indiae or. (S. K. Basu).

3. Winterina bakeriana Sacc., Notae Myc. XXIV p. 7 (Bull. Orto bot. 6506 Nap. 1918). — Peritheciis latissime laxe gregariis, imprimis epiphyllis, e basi applanata insculpta subhemisphaericis, 500-600 μ diam., nigris, subcarbonaceis, atris, nitidulis, ostiolo breviter papillato; ascis tereti-clavatis, apice rotundatis, deorsum breviter tenuato-substipitatis, 110 × 12, copiosissime filiformi-paraphysatis; sporidiis distichis, fusiformibus, utrinque acutis, leviter inaequilateris, 32 × 5, distincte 1-septatis sed serius 4-blastis, simulateque 4-locularibus, ad septum medium interdum lenissime constrictis.

Hab. in foliis emortuis Livistonae sinensis (Palmae) cultae, Singapore, Asia (BAKER). — A Wint. oxyspora P. et S. satis diversa.

**ACANTHOSTIGMA** De Not. — Syll. II p. 207, IX p. 854, XI p. 337, XIV p. 590, XVI p. 539, XVII p. 712, XXII p. 207.

1. Acanthostigma speciabile Syd., Ann. Mycol. 14., 1916, p. 79. — Hypophyllum, plagulas primitus minores sed mox confluentes et tunc

effusas tandem fere totam folii superficiem occupantes obscure atro- olivaceas valde perspicuas subvelutinas formans; peritheciis gregariis, numerosis, ovato-globosis, 150-190  $\mu$  altis, 130-160  $\mu$  latis, aterrimis, coriaceo-subcarbonaceis, papilla majuscola obtusa et crassa praeditis, ad basim et in parte inferiore pilis numerosis, praelongis, 140-320  $\mu$  longis 7-8  $\mu$  latis, flexuosis obtusis fuscis pellucidis septatis (articulis 25-40  $\mu$  longis) obsitis, contextu opaco ex cellulis 10-12  $\mu$  diam. composito; ascis clavatis, ad apicem obtusis, basi breviter stipitatis, 80-90  $\times$  16-18, octosporis; sporidiis oblongis vel oblongo-cylindraceis, 3-septatis, non constrictis, utrinque obtusis hyalinis, 25-28  $\times$  5,5-6,5; paraphysibus nullis vel saltem non visis.

Hab. in foliis vivis Olyrae (Graminaceae), Seringal, Auristella Rio Acre, Peruviae (E. ULE).

2. Acanthostigma heterochaeta Syd. et Butl., Ann. Mycol. IX, 1911, 6508 p. 403. - Peritheciis in subiculo hypophyllo subinde etiam epiphyllo maculiformi v. effuso tenui varie colorato subhyalino brunneolo usque purpureo, ex hyphis flavis v. flavo brunneolis v. purpureo-brunneolis 3-4 µ cr. ramosis vix septatis formato, solitarie dispositis v. paucis laxe aggregatis omnino superficialibus, atris v. atro-brunneis, sub microscopio atro-brunneis, globosis, 190-220 µ diam. ubique setosis, subcarbonaceis; setis variis, mox brevibus 30.40 µ tantum longis brunneis rigidis septatis, mox longioribus flexuosis, basi tantum brunneis sursum in flagellum longum hyalinum productis usque 175 µ long., quoad crassitudinem quoque ludentibus, mox praecipue brevioribus aequaliter 4-4,5 µ er., mox aut basi aut etiam ad apicem dilatatis (usque 10 µ); ascis cylindraceo-clavatis, subsessilibus, apice rotundatis, crassiuscule tunicatis octosporis, p. sp. 80-100 × 12-18; paraphysibus numerosis, hyalinis continuis, filiformibus, ascorum longitudine, 1,5-2 µ cr.; sporidiis distichis, cylindracco-fusoideis, utrinque attenuatis, rectis v. leniter curvulis, 2-5-septatis, flavidis, 37-50 \* 5-7,5, raro inferne in caudam longam hyalinam productis; pyenidiis simul praesentibus eadem forma et magnitudine ac peritheciis, aequaliter setosis, ad genus Contuream pertinentibus; pycnidiosporis oblongis v. cylindraceis, utringue rotundatis, 3-raro 4-septatis, rectis v. subinde curvulis dilute flavis, 22-30 \* 5-7,5.

Hab. in foliis vivis Phaseoli Mungi var. radiati (Leguminosae), Pusa (E. J. Butler), Dumasiae villosae Nagpur (P. A. Pundit), Dumasiae sp. (Leguminosae), Salma-

- kota (F. J. F. Shaw), Indiae or. In Phaseolo, mycelio amphigeno pallido, in Dumasia, hypophyllo, e pallide brunneo purpureo colorato.
- 3. Acanthostigma vile Sydow, Annales Mycolog. XII, 1914, p. 555, 6500 fig. 2. Peritheciis hypophyllis, sine maculis, aegre perspicuis, sparsis, globulosis v. depresso-globulosis, 130-170 μ diam., atris, opacis, coriaceis, omnino superficialibus, centro distincte ostiolatis, circa basim hyphis hyalinis brevioribus v. longioribus gracilibus cinctis v. tectis, in superiore parte pilis sparsis brevibus brunneis 2-4 septatis flexuosis vestitis; ascis clavatis, brevissime stipitatis, apice rotundatis, 8-sporis, 50-60 × 9-13, aparaphysatis (ut videtur); sporidiis 2-3-stichis, fusoideo-cylindraceis, 3-septatis, non constrictis, hyalinis v. hyalino-viridulis, 20-24 × 3,5-4,5.

Hab. in foliis Psidii guajavae (Myrtaceae), Bauco, Bontoc Subprovince Luzon, Ins. Philipp. (M. VANOVERBERGH).

- NEMATOSTOMA Sydow, Annales Mycolog. XII, 1914, p. 161. (Etym. nema filum et stoma ostiolum). Perithecia superficialia, minuta, membranacea, atra, circa ostiolum pilis longis fuscis obsita, alibi levia, parenchymatice contexta. Asci clavati, paraphysati, octospori. Sporidia clavulata ex hyalino colorata, pluriseptata. Pycnidiosporae continuae, hyalinae, minutissimae. Affine Acanthostigmellae v. Höhn. (nec non Acanthostigma De Not.).
- 1. Nematostoma Artemisiae Sydow, loco cit. p. 161 cum icon. Pe- 6510 ritheciis hypophyllis, sine maculis, sparsis, superficialibus, globosis vel ovato-globosis, tenuiter membranaceis, atris, basi hyphis flexuosis paucis dilute fuscis tenuibus cinctis, contextu fusco parenchymatico ex cellulis 8-10 μ diam. composito, ostiolo distincto breviter cylindraceo, contextu circa ostiolum firmiore et obscuriore subopaco ex cellulis minoribus composito, circa ostiolum pilis longis subrectis vel leniter flexuosis (ca. 10-30) fuscis sed tota longitudine pellucidis septatis (articulis 15-25 µ longis), crasse tunicatis, 150-300  $\mu$  longis, 3,5-4  $\mu$  latis obsitis, alibi levibus, 130-150  $\mu$ diam.; ascis clavatis, sessilibus vel subsessilibus, apice rotundatis, 50.65 × 8-10, octosporis; paraphysibus filiformibus, hyalinis, ca. 1-1,5 \mu crassis; sporidiis distichis, breviter clavatis, 3-septatis, ad septa non constrictis, apice rotundatis, deorsum attenuatis, ex hyalino olivaceo-fuscis, 14-16 × 3,5-4,5; pyenidiosporis in pyenidiis similibus evolutis, innumeris, oblongis vel bacillaribus, utrinque obtusis, guttulatis, continuis, hyalinis, 3-5 × 1,5.

Hab. in foliis Artemisiae vulgaris L. var. indicae, Maruyama Hokkaido, Japonia bor. (M. MIURA).

- NEMATOSTIGMA Sydow, Annales Mycolog. XI, 1913, p. 262 (Etym. nema filum v. hypha et stigma punctum, ob perithecia minuta pilosa). — Perithecia superficialia, subiculo insidentia, globosa, ostiolo obsoleto vel vix prominulo praedita, parenchymatice contexta, molliuscula, extus hyphis v. setulis haud rigidis obsita. Asci saccati, octospori. Paraphyses evolutae, sed mox mucosae. Sporidia elongato-fusoidea, transverse pluriseptata, diu hyalina, tandem dilute colorata. - Videtur affine gen. Acanthostigma De Not.
- 1. Nematostigma obducens Sydow, Annales Mycolog. XI, 1913, p. 6511 262. — Hypophyllum, in mycelio ascomycetis alicujus indeterminati parasiticum, caespites rotundatos 1-3 mm. latos planos olivaceo subviolaceos radiantes efformans; hyphis subhyalinis usque pallide olivaceo-violaceis, septatis, ramosis, 1,5-2,5 \mu crassis; peritheciis numerosis, globosis, 140-200 µ diam., atro-violaceis v. atrobrunneolis, ostiolo minuto vix prominulo, extus hyphis paucis v. modice numerosis rectis (sed haud rigidis) v. parum flexuosis apice obtusis usque 110 μ long. 5-9 μ cr. pluries septatis olivaceo-brunneis obsitis, contextu subtenui, molli, obscure olivaceo-brunneo, parenchymatice ex cellulis majusculis 10-16 μ long, composito; ascis plerumque saccatis, subsessilibus, 70-90 \* 24-30, octosporis, filiformiter paraphysatis; paraphysibus mox mucosis; sporidiis parallele positis, elongato-fusiformibus, rectis v. leniter inaequilateris, utrinque leniter attenuatis, sed obtusis 6-9-septatis, non v. vix constrictis, primitus hyalinis, in maturitate pallide flavo-brunneolis v. olivaceo-brunneolis,  $42-55 \approx 7.5-9$ .

Hab. in foliis Scutiae in dicae (Rhamnaceae) in mycelio Ascomycetis cujusdam indet. parasiticum, Port Elizabeth, Cape Prov., Africae Austr. (E. M. Doldge). — Eodem gen. pertinet etiam Acanthostigma heterochaetum Syd. et Butl. et verisimiliter Acanthostigma violaceum Rac.

HERPOTRICHIELLA Petrak, Ann. Mycol. XII, 1914, p. 472. — Perithecia libera, subcoriacea, globosa, undique aculeolis v. setulis brunneo-atris, interdum septatis, acuminatis vestita. Asci oblongoclavati, 8-spori, aparaphysati. Sporidia subdisticha, ovato-oblonga, fusco-cana, 3-septata. — Verisimiliter ad gen. Acanthostigma referendum.

1. Herpotrichiella moravica Petrak, l. c. p. 472. — Peritheciis semimmersis erumpentibus, demum superficialibus, sparsissimis, raro subgregariis, minutis, globosis, ostiolis breviter conicis, subcoriaceis, 120-150 μ diam., fusco-atris, undique setulis v. aculeolis nigro-fuscis, interdum septatis acuminatis, 20-35 × 3-4 obsitis; ascis sessilibus, oblongo-clavatis, medio circiter crassissimis, apice rotundatis ibique incrassatis, 28-42 × 6-10; sporidiis ovato-oblongis utrinque rotundatis 3-septatis, ad septa constrictis, loculi uni-vel eguttulatis, fusco-canis, 10-14 × 3-4.

Hab. in trunco decorticato Fagi silvaticae (Fagaceae), in silvis prope Podhorn ad urbem Mähr. Weisskirchen, Moraviae or.

ENCHNOSPHAERIA Fuck. — Syll. II p. 205, IX p. 853, XVI p. 541, XVII p. 713.

1. Enchnosphaeria profusa Sydow, Annales Mycol. X, 1912, p. 407.— 6513 Plagas effusas aterrimas velutinas formans; peritheciis aequaliter distributis, in mycelio repente parco superficialiter sessilibus, circumcirea basim setis v. pilis numerosissimis erectis flexuosis simplicibus septatis opacis 300-450 μ long. 4-5 μ latis apice obtusis vestitis, intra pilos omnino absconditis, applanato-globosis, in sicco leniter collapsis, atris, coriaceis, 200-320 μ diam., ostiolo obsoleto, contextu parenchymatico, cellulis 8-15 × 6-10 composito; ascis fasciculatis, aparaphysatis, clavatis, apice rotundatis crasseque tunicatis, basi pedicellatis, 150-220 × 20-25, octosporis; sporidiis ditristichis, oblongo-fusiformibus, subinde leniter inaequilateris, 12-16-septatis, non v. vix constrictis, utrinque leniter attenuatis, sed apicibus obtusis, hyalinis, 55-70 × 8-10.

Hab. ad truncum Jasmini malabarici (Oleaceae), Matheran Bombay Presid., Indiae or. (S. L. АЈКЕКАК).

LASIOSPHAERIA Ces. et De Not. — Syll. II p. 505, IX p. 969, XIV
 p. 638, XVI p. 576, XVII p. 790, XXII p. 210.

1. Lasiosphaeria coacta W. Kirschst., Krypt. Fl. Brandenb. VII p. 6514 234 (1911).— Peritheciis superficialibus, in crustam plus minusve extensam confluentibus, sphaeroideis vel ovatis, 450-600, ostiolo subindistincto, excipulo crasse coriaceo, atro, extus grosse granuloso et pilis griseolis, septatis, demum deciduis vestito; ascis cylindraceis, interdum medio inflatulis, pedicellato-attenuatis, apice applanatis, 4-8-sporis, 100-120 × 11-15, paraphysibus filiformibus

ramosis obvallatis; sporidiis distichis, ovoideis vel ellipsoideis, initio hyalinis, guttulatis, dein brunneis, 1-4-septatis, non constrictis,  $16-25 \approx 6.9$ .

Hab. in caulibus muscosis putrescentibus Callunae (Ericaceae), Grossbehnitz in Germania.

2. Lasiosphaeria faginea (De Not. et Ces.) Massa, Ann. di Botanica, v. 6515 X, 1912, p. 422, tab. IV fig. 1; Botryosphaeria faginea De Not. et Ces. in herb. (nomen et icon.).— Peritheciis carbonaceis superficialibus, aggregatis, quandoque confluentibus in crustam rubiginosam dein atram, primum rubiginoso-furfuraceis v. subtomentosis, dein subglabris, ostiolo distincto prominulo; ascis fusoideo-clavatis, basi attenuatis, pedicellatis, 100-150 × 12-14; paraphysibus filiformibus, numerosis, flexnosis, simplicibus (rarius furcatis), sporidiis subfusoideis, utrinque attenuato-rotundatis, rectis v. lenissime subcurvulis, initio 3-4 guttulatis dein medio distincte septatis et constrictis (quandoque septis secundariis parum distinctis et vix certis praeditis), 30-36 × 8, hyalinis.

Hab. in disco F a g i (Fagaccae), marcescente, S. Giovanni d'Andorno, Italiae bor. (CESATI 1860). — Las. viridicomae (C. et Peck) et L. canescentis (Pers.) affinis sed distincta. — Ad gen. Lasiosphaeriam spectat etiam Sphaeria Rhacodium Sacc., secundum Cesati et De Not. in 1. c.

3. Lasiosphaeria leptochaeta W. Kirschst., Krypt. Fl. Brandenb. VII 6516 p. 235 (1911). — Peritheciis superficialibus, sparsis vel gregariis e basi sphaeroidea in ostiolum obtuse conicum sensim attenuatis, 350-400 μ diam., excipulo coriaceo, dense contexto, atro, setulis atro-brunneis, continuis, 40-50 × 3-4 induto; ascis cylindraceo-ovoideis vel clavatis, sursum rotundatis incrassatisque, breve pedicellatis, octosporis, 80-120 × 9-12; paraphysibus tenuibus, ramosis copiose obvallatis; sporidiis irregulariter 2-raro 3-stichis, ellipsoideo-elongatis, utrinque rotundatis, hyalinis vel viridulis, initio 2-4-guttulatis dein 4-locularibus, 16-24 × 4-6.

Hab. in ramo decorticato putrescente Fagi (Fagaceae), Baudach, Germania.

4. Lasiosphaeria mollis Rehm, Ascom. Philipp. VIII, in Leaflt. of Philipp. Bot. VIII, 1916, p. 2952.—? Las. culmorum Miy. et Ha., Syll. XXII p. 212.— Perithecia latas plagas nigras formantia, arcte congregata, sessilia globulosa minutissime papillulata, mox collabentia parenchymatice fusce contexta, 0,15 mm. lata, pilis plurimis simplicibus, rectis rarius curvatulis, septatis, fuscis, -200 μ longis,

4-5  $\mu$  latis, obsessa et obtecta; ascis evanidis; sporae hyalinae ellipsoideae 3-septatae non constrictae, 15-18  $\times$  7-8. Paraphyses?.

Hab. Bambusam blumeanam (Graminaceae), Los Baños, Ins. Philipp. (S. A. REYES).

5. Lasiosphaeria culmicola Miyake et Hara, Stud. üb. die Pilze Bam-6518 busse Jap., in litt. 1912. — Maculis culmicolis versiformibus, vix elevatis nigricantibus; peritheciis aggregatis, superficialibus, in subiculo pulverulento, ovoideis v. lageniformibus, nigris, 300-380 μ diam., contextu parenchymatico 40 μ crasso, pilis dense septatis; atro-brunneis consperso; ascis clavatis, raro cylindraceis, 100-125 × 14-18; sporidiis tristichis v. inordinatis, cylindraceis utrinque rotundatis, v. ellipsoideis, rectis v. curvis, intus granulosis, 7-13-septatis, hyalinis, 50-65 × 4-5; paraphysibus filiformibus asco paullo brevioribus.

Hab. in culmis emortuis Phyllostachydis bambusoidis (Graminaceae), Kawauye-mura Prov. Mino, Japonia.

6. Lasiosphaeria multiseptata Earle apud Seaver, Mycologia 4., 1912, 6519 p. 120, t. 67 fig. 8-9\*). — Peritheciis ut in Las. hispida; sporidiis longe vermiformibus angustis primum multiguttatis, dein multiseptatis?, et subinde uno apice capitato-dilatatis, 60-70 × 3-4, hyalinis (immaturis?).

Hab. in ligno putri Hieorias sp. (Juglandaceae), prope Tuskegee Alabama, Amer. bor.

7. Lasiosphaeria jamaicensis Seaver, Mycologia 4., 1912, p. 122, t. 66 6520 f. 1-3. — Peritheciis dense gregariis subconico-depressis substrato simulate immersis sed superficialibus 1 mm. diam., hostiolo amplo circulari et satis prominenti praeditis; tomento brunneo flexuoso e brunneo nigricante vestitis et setulis erectis ut in subiculo proximo munitis; hyphis brunneo-nigris septatis, basi 10-12 μ diam.; ascis clavatis octosporis; sporidiis vermiformibus utrinque obtusis medio abrupte curvis, 8-guttulatis dein 7-septatis, subhyalinis v. dilute flavidis, 50-60 × 7; paraphysibus copiosis filiformibus.

 ${\it Hab}.$  in trunco plantae ignotae, probabiliter P a l m a e , Castle Gardens, Jamaica.

8. Lasiosphaeria araneosa Torrend in Champ. Congo Belge, Bull. Jard. 6521 Bot. Bruxelles VI, 1 (1913), p. 7. — Peritheciis ovoideis, minoribus, 0,3-0,8 mm. latis, atris, rugosis, in subiculo araneoso albo-ci-

<sup>\*)</sup> Cfr. Seaver, Monographia generis Lasiosphaeriae in Mycologia 4., 1912, p. 115-124, t. 66-67.

nerascente erumpentibus, ostiolo obsoleto; ascis cylindraceis, 60- $80 \times 7.9$ ; sporidiis vermiculariformibus,  $35.45 \times 3.5$ , hyalinis, 6.8septatis; paraphysibus raris, linearibus, 1 µ diam.

Hab. ad ligna arboris ignotae, Kisantu, Congo (H. VANDERYST).

9. Lasiosphaeria chlorina Rehm in Theissen, Ann. Mycol. X, 1912, 6522 p. 12.— Theissen, Decades F. Bras. n. 117.— Peritheciis dense gregariis in cortice et ligno denudato, lata basi sessilibus, globosobotuliformibus, griseo-chlorinis, contextu molli, vertice nigro, poro pertuso, 350-460 × 320-380; ascis elongatis, medio ventricosulis, p. sp.  $85 \cdot 125 \times 10 \cdot 12$ , pedicello circa  $20 \cdot 28 \mu$  long.; sporis viridulis, vermiformibus, bi-tristichis, 30-35 × 3 (ut plurimum nondum septatis, procul dubio demum 3-septatis).

Hab. in ligno emortuo, Sao Leopoldo, Rio Grande do Sul, Bra. siliae (RICK). - Affinis L. chloronemae (B. et Br.) Sacc.

HERPOTRICHIA Fuck. — Syll. II p. 211, IX p. 856, XI p. 338, XIV p. 592, XVI p. 541, XVII p. 714, XXII p. 212.

 Herpotrichia philippinensis Rehm, Ascomyc. Philipp. V, Leaflets of 6523 Philipp. Botany, VI (1914) p. 2203. — Peritheciis sessilibus, plerumque arete congregatis, globosis, mycelio plus minusve conjunctis, apice applanatis, glabris, ostiolo perspicuo mox sanguineo-cincto pertusis, ceterum obscure fuscis, pilis longis simplicibus, haud curvatis, fuscis, obtusis, septatis, 3-4 μ cr. obsessis, 0,5-0,8 mm. diam., excipulo crasse parenchymatico, subcoriaceo; ascis clavatis, apice rotundatis, pedicellatis,  $150 \times 12-14$ , J., paraphysibus filiformibus, 2-3 μ cr. obvallatis; sporidiis 2-3-stichis, fusoideis, rectis, 1-dein 3-septatis, non constrictis, mox fuscidulis,  $25 \times 5$ .

Hab. in Alstonia scholari emortua (Apocynaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO). -Affinis H. xestotheli (Bk. et Curt.) Syll. II p. 194, sub Lasiosphaeria).

2. Herpotrichia Bakeri Syd., Ann. Mycol. 15., 1917, p. 202. — Peri- 6524 thecia superficialia, sparsa vel aggregata subglobosa, 450-550 μ diam., apice applanata, mycelio repente conjuncta, inferne pilis subrectis vel flexuosis simplicibus brunneis septatis (articulis 30-35 μ longis) ca. 300-400 µ longis et 4 µ crassis copiose obsita, superne glabra, levia, atro-brunnea, pariete parenchymatico e cellulis 9.11 µ diam. composito, coriacea, ostiolo minuto, tandem collabentia; asci clavati, 100-130 \* 14-16, octospori, paraphysati; sporae distichae, fusoideae, utrinque obtuse attenuatae, primitus 1-septatae et hyalinae, maturae 3-septatae et fuscidulae, non constrictae, 34-36 × 5-7.

Hab. in ramis putridis Sambuci javanicae (Caprifoliaceae), Mt. Maquiling, Prov. Laguna, Ins. Philipp. (C. F. BAKER).

3. Herpotrichia quinqueseptata J. R. Weir, Journ. Phys. Res. IV (1915) 6525 p. 252, tab. 34. — Peritheciis gregariis vel sparsis, globosis, 0,2-0,45 mm. diam., subiculo 0,15-0,48 mm. crasso, obscure brunneo partim immersis, saepius liberis, ostiolo non prominente; ascis cylindraceis vel tenuiter fusoideis, 100-135 × 14-16,5; paraphysibus filiformibus evanidis; sporidiis irregulariter distichis, fusoideis vel longe ellipsoideis, interdum leniter curvatis, maturis 5-septatis, ad septa non vel vix constrictis, dilute brunneis, 28-34 × 7,5-9.

Hab. in ramis et foliis vivis Piceae Engelmannii (Coniferae), Marble Mountain, Idaho, Amer. bor.

4. Herpotrichia bambusana P. Henn., Hedw., vol. 48. (1908) p. 106. — 6526 Mycelio effuso, repente, atro, hyphis ramosis, septatis, fuscis; peritheciis gregariis, superficialibus, subglobosis, collabentibus, atris-140-180 μ diam., setulis erectis, rigidulis, septatis, atris, apice globuloso-rotundatis, 70-150 × 4-5, vestitis; ascis clavatis v. subfusoideis octosporis, paraphysatis, 40-50 × 10-13; sporidiis oblique monostichis vel subdistichis, oblonge fusoideis, utrinque subacutis, 4-guttulatis, medio 1-septatis, deiu 3-septatis, hyalinis, 12-20 × 3,5-4,5.

Hab. in vaginis emortuis Bambusae vulgaris (Graminaceae), hort. botan. Goeldi, Parà (BAKER). — H. sabalicolae P. Henn. affinis.

5. Herpotrichia heukeliana Sydow, Ann. Mycol. 18., 1920, p. 158. — 6527 Perithecia omnino superficialia, dense gregaria, subglobosa, 300-350 μ diam., ubique summo apice tantum excepto pilis longissimis simplicibus vel fere simplicibus rectis vel leniter undulatis septatis (articulis 20-25 μ longis) fuscidulis 3-5 μ crassis densissime obsita, papillula minuta nitidula praedita, membranaceo-coriacea, contextu opace celluloso, cellulis ca. 7-10 μ diam.; asci clavati, stipitati, 150-175 × 14-16, ad apicem rotundati, filiformiter paraphysati, octospori; sporae distichae, fusoideae, leniter inaequilaterae, ex hyalino pallide flavo-brunneolae, 8-9-septatae, non constrictae, loculo tertio supero quam ceteris conspicue protuberanti, 32-36 μ longae, 4-5 μ latae.

Hab. in culmis emortuis Phragmitis communis (Graminaceae), Daasdorf prov. Buttelstedt Thuringiae, Germania (A. HENKEL).

6. Herpotrichia leptospora W. Kirschst., Krypt. Fl. Brand. VII p. 232 6528

(1911).— Peritheciis superficialibus, sparsis vel dense adproximatis, interdum 2-pluri-concrescentibus, sphaeroideis, 600-800  $\mu$  diam., ostiolo papillulato praeditis; excipulo carbonaceo, fragili, atro, pilis sparsis brunneis vestito; ascis cylindraceo-clavatis, in pedicellum brevem attenuatis, sursum rotundatis et incrassatulis, octosporis, 125-170  $\times$  9-12, paraphysibus tenuibus, filiformibus, copiosis, ramosis obvallatis; sporidiis irregulariter distichis, fusoideo-elongatis, initio bilocularibus, dein tenuiter 3-5-septatis, luteolis, 38-48  $\times$  4-6.

Hab. in ramis putrescentibus Corni, Quercus, nec non in caulibus Rubi idaei in Brandenburgia, Germania. — Perithecia subcalva; mycelium ramos rubro-tingens.

7. Herpotrichia moravica Petrak, Ann. Mycol. XIII, 1915, p. 45; Pe-6529 trak, Fl. Boh. et Mor. exs., II Ser. I Pilze n. 969. — Peritheciis late sparsis, raro gregariis, superficialibus, parvis, nigris, 100·240 μ diam., poro minutissimo pertusis undique setulis vel aculeolis rigidis, acuminatis, non septatis, 48-66 μ longis basi 5-6 μ latis obsitis; ascis vix paraphysatis, oblongo-clavatis, basin versus paullum attenuatis, breviter sed crassiuscule stipitatis, apice incrassatis rotundatis, 80·105 × 10·14, octosporis, sporidiis di-vel fere tristichis hyalinis, elongato-fusoideis utrinque paullum attenuatis subobtusis multiseptatis, septis plerumque 9·12, ad septa non constrictis, plus minusve curvatis, raro fere rectis, 32-56 × 3-5, guttulas numerosas includentibus.

Hab. in ligno putrescenti in silvis, loco dicto « Teufelskanzel » prope pagum « Podhorn » non procul ab urbe, Mähr.-Weisskirchen », Moraviae orientalis.

## Sept. 7. Phaeophragmiae

- **LEPTOSPHAERIA** Ces. et De Not. Syll. II p. 13, IX p. 762, XI p. 321, XIV p. 562, XVI p. 510, XVII p. 719.— Ignotis plurimarum specierum characteribus paraphysium et macularum, genera *Leptosphaerella* Sacc. et *Phaeosphaeria* Miyake inquirendae sunt illarum species hic inter *Leptosphaerias*.
  - I. Eu Leptosphaeria. Species plerumque rami-caulicolae, paraphysatae.
- 1. Leptosphaeria Agaves Syd. et Butl., Ann. Mycol. IX, 1911, p. 409.— 6530 Peritheciis in maculis effusis albidis elongatis insidentibus, spar-

sis, minutissimis, globosis, atris, punctatis,  $80\text{-}120~\mu$  diam., epidermide tectis, ostiolo tantum erumpentibus; ascis curvulis, cylindraceis, sessilibus,  $50\text{-}80 \times 8\text{-}12$ , octosporis; paraphysibus numerosis; sporidiis distichis, elongato-fusoideis, utrinque leniter attenuatis, 3-septatis, vix v. leniter constrictis, flavidis,  $15\text{-}22 \times 4\text{-}5$ .

Hab. in foliis languescentibus Agaves rigidae var. Sisalanae (Amaryllidaceae), Douracherra, Assam, Indiae or. (E. J. Butler). — Lept. filamentosae Ell. et Ev. proxima, sed peritheciis e contra sporidiis majoribus diversa.

2. Leptosphaeria paraguariensis A. Maublanc, Bol. Agric. Sao Paulo 6531 1915, p. 315, tab. IV fig. 13-14; Bull. Soc. Mycol. de Fr., XXXVI, 1920, p. 35, tab. II fig. 6-7. — Peritheciis epiphyllis, sparsis, immersis, globulosis, papillatis, tunica fusca, tenui praeditis, 120 μ diam.; ascis elongato-clavatis, breviter pedicellatis, 60·75 × 10-12, 8-sporis; paraphysibus filiformibus, diffluentibus; sporidiis elongato-ellipticis, distichis v. basi monostichis, primum basi 1-septatis, dein 2-septatis, constrictis, utrinque rotundatis, fuligineis, guttulatis, 15-18 × 4-5.

Hab. in foliis Ilicis paraguariensis (Aquifoliaceae), ad maculas Gercosporae ilicicolae, Brasilia (Herb. Mus. R. Jan.). — A L. Yerbae Speg., species corticola, omnino diversa.

3. Leptosphaeria dryadea Sacc. — Syll. Fung. II p. 50. — \* Lept. 6582 lussoniensis Sacc. subsp. n., Ann. Mycol. XII, 1914, p. 304. — Maculis epiphyllis vagis candicantibus linea angusta atra cinctis; peritheciis punctiformibus paucis, globoso-lenticularibus, 90-100 μ diam., poro rotundo pertusis; ascis cylindraceis, breviter stipitatis, 47-50 × 8, tenuiter paraphysatis, octosporis; sporidiis distichis, fusoideis, 3-septatis, 14-18 × 4,5, ad septum medium subconstrictis, olivaceis.

Hab. in foliis morientibus K i g e l i a e p i n n a t a e (Bi-gnoniaceae), Los Baños, Luzon, Ins. Philippin. (M. B. RAIMUNDO).— A typo differt, praeter matricem, ascis paullo minoribus (non 70  $\times$  10) et sporidiis paullo angustioribus (non 18-20  $\times$  5-6).

4. Leptosphaeria simillima Rehm, Ascomyc. Philipp. V, Leaflets of Phi-6533 lipp. Botany, VI (1914) p. 2203.— Peritheciis cortice innatis, gregariis, vix pustulatim prominulis, globosis, atris, glabris, 300 μ circ. diam., papillula punctiformi atra prominente; ascis clavatis, 35-40 × 9, filiformi-paraphysatis; sporidiis distichis, clavatis, apice superiore obtusis, rectis, 3-septatis non constrictis, 9-10 × 4.

Hab. in ramulo emortuo C a p p a ridis horridae (Cap-

paridaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

5. Leptosphaeria Doliolum (Pers.) De Not. — Syll. II p. 14.— var. Cacaliae Naoumoff, Bull. Soc. Oural. Amis Sc. Nat. XXXV (1915) p. 21 extr., tab. 1 fig. 3. — A typo differt sporidiis paullo crassioribus. Perithecia hic inde gregaria, primo tecta, conoideo-rotundata 385  $\mu$  diam., 275  $\mu$  alta, ostiolo 16  $\mu$  diam. pertusa. Asci cylindracei 110  $\times$  10. Sporidia monosticha, fusoidea, 3-septata, 25-27  $\times$  8-8,5.

Hab. in caulibus siccis Cacaliae hastatae (Compositae), Gub. Perm in Rossia — Affinis, ut videtur, L. pinguiculae Sace. et L. pachysporae.

6. Leptosphaeria Coleosanthi Ch. E. Fairman, Mycologia 10., 1918, p. 6535 246.— Peritheciis sparsis immersis dein erumpenti-superficialibus, globosis v. globoso-depressis ostiolo plus minus elongato papilliformi prominenti praeditis, nigris, 250-350 μ diam.; ascis clavato-cylindraceis e brevi-longestipitatis, octosporis, 90-135 × 10-12; sporidiis irregulariter biseriatis, fusoideis 3-5-septatis, non distincte constrictis, flavis v. brunneo-flavescentibus, 40-50 × 3,33-4; paraphysibus copiosis filiformibus.

Hab. in caulibus vetustis C o l e o s a n t h i r e n i f o r m i s (Compositae), Ute Park Colfax C. 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

7. Leptosphaeria nigricans Karst. — Syll. II p. 38 — var. Grindeliae 6536 Ch. E. Fairman, Mycologia 10., 1918, p. 245.— Peritheciis sparsis v. gregariis in areis nigrescentibus sitis, depresse globosis, demum collabescentibus depressis v. subumbilicatis, nigris, 250-300 μ diam.; ascis clavato-cylindraceis apice rotundatis breviter stipitatis, octosporis, 70-100 × 10, paraphysibus copiosis filiformibus circumdatis; sporidiis distichis, 3-5 septatis, septo medio constrictulis; oblongofusoideis primum hyalinis dein flavis v. viridi-flavis, 23-27 × 3,33-4.

Hab. in matrice non indicata (? Grindelia, Compositae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. Standley).— A typo differt praecipue peritheciis gregariis et collabescentibus.

8. Leptosphaeria trimerioides Rehm, Ann. Mycol. XIII, 1915, p. 2.—
Perithecia in maculis late cinereo-albidulis gregarie innata, globulosa, minutissime papillulata, demum denudata, atra, glabra, 0,150,2 mm. diam.; asci cylindraceo-clavati, 80-120 × 9-10, 8-spori;
sporae ellipsoideae vel subclavatae, utrinque subacutatae, 2-sep-

tatae, cellula media plerumque majore, ad septa subconstrictae, flavidulae,  $15.18 \times 5-6$ , 1-stichae; paraphyses filiformes.

Hab. ad caules variarum plantarum, Tegernheim prope Ratisbonam Bavariae, ad caules Liatris scariosae (Compositae), Kulm, N. Dak., U. St. America (BRENCKLE).

9. Leptosphaeria nigrificans Bubàk et Wròblewski in Bubàk, Hedw. 6538 57. p. 329 (1916). — Peritheciis singulis vel gregariis, immersis, epidermide tectis, globosis, vel parum applanatis, 150-200 μ diam.; apice subconico erumpentibus, atris, in pseudostromate sub epidermide atro-brunneo, intus flavo-brunneo immersis; ascis cylindricis vel cylindraceo-clavatis, 55-65 μ longis, 9-10 μ latis, rectis vel curvatis, supra rotundatis et incrassatis, basi attenuatis, breve pedicellatis, octosporis, paraphysibus filiformibus, crebris obvallatis; sporidiis distichis, rarius tristichis, fusoideis, 13-19 μ longis, 3,5-4 μ latis, rectis vel curvatis, utrinque attenuatis, dilutissime olivaceis, biseptatis.

Hab. in foliis et culmis C a r i c i s sp. (C. leporinae?) (Cyperaceae), Werbiaz Nizuy, Galicia (A. WRÒBLEWSKI).

10. Leptosphaeria occulta Lind, Dan. Fungi, p. 218 t. III f. 43 (1913).— 6539
Peritheciis sparsis, tectis, sub epidermide nidulantibus, globosis in ostiolum conicum obtusum, punctiformi prominulum attenuatis, aterrimis, 250 μ diam., tenui-membranaceis; ascis tereti-clavatis, basi noduloso-stipitatis, apice rotundatis et crasse tunicatis, paraphysatis, 60-68 × 11-13, octosporis; sporidiis di-tristichis, fusoideis, rectis vel curvulis, flavo-fuligineis, 36-40 × 4, quinque septatis, ad septa non constrictis, loculo secundo leviter tumido.

Hab. in foliis emortuis Caricis hirtae (Cyperaceae), in Dania.

11. Leptosphaeria saxonica v. Höhnel, Ann. Mycol. 16., 1918, p. 84.— 6540 Peritheciis nigris globosis 300 μ diam. sparsis v. parce gregariis v. breviter seriatis, subepidermicis sed papilla ostiolari erumpentibus; ostiolo rotundato 50-60 μ lato; contextu 24 μ cr. e cellulis obscure brunneis usque 6-8 μ cr. efformato; paraphysibus numerosis filiformibus mucosis; ascis clavatis breviter pedicellatis octosporis 110-124 × 13-15, J-; sporidiis plerumque distichis flavo-olivaceis plerumque rectis 5-6-locularibus, elongato-fusoideis, apice rotundatis ad septa non constrictis, 32-37 × 5-6.

Hab. ad caules emortuos Scirpi maritimi (Cyperaceae), prope Königstein in Saxonia (W. KRIEGER).

12. Leptosphaeria Gaultheriae Dearness, Mycologia 9., 1917, p. 349.— 654

Peritheciis sparsis, nigris, subcuticulari-erumpentibus v., epidermide secedente, superficialibus, ovoideo-conicis v. globosis, 115-275  $\mu$  diam.; ostiolo brevi, conico, nigro-nitenti; ascis late linearibus, 75-80  $\times$  6,5-7; paraphysibus simplicibus v. divisis; sporidiis pallide brunneis, uniseriatis, imbricatis, 3-septatis, 12-16  $\times$  5, medietate super. longiori.

Hab. in caulibus emortuis G a ultheriae Shallon (Ericaceae), Vancouver Island. (J. MACOUN).

13. Leptosphaeria bresadoleana Jaap, Ann. Mycol. 14., 1916, p. 14.— 6542 Peritheciis dense gregariis caules late obtegentibus, immersis, globosis, nigris, demum epidermidem ostiolo brevi papillato disrumpentibus; ascis longe clavatis, apice rotundatis, 60-80 \* 10, octosporis; paraphysibus filiformibus, 1,5-2 μ cr., hyalinis, multigutulatis; sporidiis oblongo-cylindraceis v. subclavatis, rotundatis, 13-20 \* 4-5, oblique 1-2-seriatis, 4-cellularibus, plerumque 5-guttulatis, leviter constrictis, secunda cellula super. paullo crassiore, flavoviridulis.

Hab. in caulibus vetustis siccis E u p h o r b i a e W u l f en i i (Euphorbiaceae), pr. Gravosa Dalmatiae.— Matricis superficies e fungo viridulo-grisea fit.

14. Leptosphaeria Melicae Bubàk, Ann. Naturh. Hofmus. Wien XXVIII 6543 (1914) p. 198. — Peritheciis sparsis, globosis, immersis, papilla conica plus minusve elongata, crassa erumpentibus, atris, opacis, 120-300 μ diam., basi saepe hyphis brunneis insidentibus, contextu pseudoparenchymatico atrofusco; ascis clavatis vel elongato-clavatis, apice parum attenuatis rotundatisque, basi breviter pedicellatis, crassiuscule tunicatis, octosporis, 90-130 × 25-30, paraphysibus filiformibus obvallatis; sporidiis 3-rarius 4-stichis, fusoideis, curvatis, 6-8-septatis, ad septa non vel parum constrictis, flavidobrunneis, 43-48 × 7,5-10, rectis usque ad 57 μ longis, loculo tertio saepe paulum protuberante.

Hab. in culmis emortuis Melicae in a equiglumis (Graminaceae), ad cacumen montis Meleto (Meretung) Dagh in Tauro armenio, Kurdistania, alt. 3000 m.— Affinis L. culmifragae (Fr.) Ces. et De Not.; differt sporidiis longioribus et crassioribus.

15. Leptosphaeria Mühlenbergiae Rehm, Ann. Mycol. XIII, 1915, p. 5.— 6544
Perithecia gregaria, primitus innata, dein emergentia, demum denudata, conoidea, glabra, atra, ad basim hyphis nonnullis fuscis obsessa, 0,25 mm. lata; asci clavati, apice rotundati, 140 × 15,
8-spori; sporae fasiformes, haud acutatae, rectae, primitus medio

septatae et constrictae, utrinque guttis 2 magnis instructae, hyalinae, demum fuscidulae, 3-septatae, cellulis aequalibus, 1-guttatis,  $30-35 \approx 6-7$ , distichae. Paraphyses filiformes, septatae.

Hab. ad ramulos M ü h l e n b e r g i a e r a c e m o s a e (Graminaceae), Nyland Grove N. Dak., America bor. (Brenckle).

16. Leptosphaeria associata Rehm, Ascom. exsicc. fasc. 50 n. 1994, 6545 Ann. Mycol. X, 1912, p. 356.— Peritheciis in maculis niveo-dealbatis culmum supra Epichloëm plane exsiccatum ab Botrytis Epichloes Ell. et Dearn. 4 cm. longe obsessam ambientibus gregariis, primitus innatis, mox sessilibus, globulosis, haud papillulatis, glabris, nigro-fuscis, 0,10-0,12 mm. diam., membranacee fusce contextis; ascis clavatis, 75-90 × 10, octosporis; sporis fusiformibus, rectis, subacutatis, primitus triseptatis, cellula secunda paullum latiore, dein 5-septatis, parte superiore 2-inferiore 4-cellulare, quaque cellula 1-guttata, hyalinis, demum fuscidulis, 20-25 × 5-6, distichis; paraphysibus filiformibus 2 μ cr.

Hab. ad Epichloem typhinam in Mühlenbergiae sp. (Graminaceae), London Ont. Canada, Amer. bor. (DEARNESS).

17. Leptosphaeria subalpina Bubàk, III Beitr. Pilz. Montenegro, in 6546 Botanikai Közlemények, 1915, p. (59). — Peritheciis dispersis vel laxe seriatis, globosis, globoso-conicis, 150-270 μ in diam., totis immersis, solum poro papillae longiusculae erumpentibus, parietibus tenuibus, contextu parenchymatico, castaneo-brunneo; ascis cylindraceis, 100-150 × 19-24, crassiuscule tunicatis, apice rotundatis, nec incrassatis, basi brevissime stipitatis, paraphysibus filiformibus obvallatis, octosporis; sporidiis distichis vel subdistichis, fusoideis, 38-48 × 5,5, curvulis vel rectis, 6-7 septatis, non constrictis, loculo tertio vel quarto ab apice parum latiore, utrinque acutato-attenuatis, flavidis.

Hab. in rimis vaginarum Phragmitis communis (Graminaceae), Barno Jezero, ad Zabljak (Durmitorensis), Montenegro.

18. Leptosphaeria Stipae Trab., Étude sur l'Halfa, Alger 1889 p. 48 6547 t. XVI, Leptosphaeria pampaniniana Sacc., Bull. Soc. Bot. it. 1913, p. 152, Ann. Mycol. XI, 1913, p. 566.— Peritheciis laxe gregariis globulosis, leviter depressis, obtusis, non v. vix papillatis, 250 μ diam. poro pertusis, nigris; contextu distincte parenchymatico, fuligineo, ex cellulis 9-10 μ diam. formato; ascis crasse elongato-fusoideis, 130 × 35-40, utrinque leviter obtuse tenuatis, brevissime pedicellatis, filiformi-paraphysatis, octosporis; sporidiis oblique mo-

nostichis v. partim distichis, late fusoideis, utrinque obtusulis, rectis,  $35-38 \times 11-14$ , triseptatis, ad medium septum leviter constrictis, initio 4-nucleatis, olivaceis.

Hab. in foliis putrescentibus Stipae tenacissimae (Graminaceae), in Algeria (TRABUT), Ain Scersciara, Tarhuna, Tripolitania (PAMPANINI). — Valde similis Lept. agminali Sacc. sed, praeter matricem diversissimam, differt peritheciis minoribus, ascis crassioribus, sporidiis rectis et ad septum medium tantum constrictis etc. Diagnosis Trabutiana nimis brevis, sed de identitate cum L. pampaniniana non dubitandum.

19. Leptosphaeria matritensis Gz. Fragoso, Bol. R. Soc. Españ., Hist. 6548 Nat. t. 18, 1918, p. 368. — Peritheciis numerosis, innato erumpentibus, globosis, globoso-depressis vel subconoideis, atris, usque 300 μ diam., contextu pseudoparenchymatico, membranaceo, ostiolo regulariter pertuso; ascis elongato-clavatis, rectis curvulisve, 100-140 × 21-30, brevi stipitatis, paraphysibus obsoletis; sporidiis distichis, oblongo-fusoideis, utrinque attenuato-obtusis, plerumque curvulis, 30-42 × 9-12, 3-septatis, ad septa constrictis, primum hyalinis, loculis guttulatis, demum dilute-fuscescentibus denique amoene castaneis.

Hab. in culmis, foliis vaginisque siccis Stipae pennata e (Graminaceae), prope Madrid, circa Puente de San Fernando, Hispania (J. COGOLLUDO et A. PLANAS). — A Leptosphaeria vagans Karsten, proxima sed diversa; a L. Stipae Trabut — L. pampaniana Sacc., diversissima.

20. Leptosphaeria Petrakii Sace., Ann. Mycol. XII, 1914, p. 287. — 6549 Peritheciis laxe et late gregariis, subcutaneo-erumpentibus, minutis, globulosis, vix papillatis, 170-200 μ diam, ostiolo 20-25 μ diam., contextus cellulis globoso-angulatis, 8-12 μ diam., fuligineis; ascis. oblongo-clavatis, apice rotundatis, 60-70 × 11-12, subsessilibus, paraphysibus crassiusculis, guttulatis parce obvallatis, octosporis; sporidiis tristichis, fusiformibus, saepius curvulis, utrinque obtusulis, 8-10 guttulatis, 7-9 septulatis, ad septum medium leniter constrictis, 35 × 4-5, dilute olivaceis, medietate inferiori paullo angustiori.

Hab. in calamis morientibus Luzulae nemorosae (Juncaceae), M. Weisskirchen, Moravia (F. Petrak). — Leptosph. Junci, L. lineolari et L. asparaginae affinis, sed vel septatione sporidiorum v. proportione partium diversa.

21. Leptosphaeria montana Trav., Bull. n. 8 Societé Flore Valdôtaine, 6550

p. 20 extr. (1912). — Peritheeiis subgregariis, epidermide tectis, prominulis, dein ostiolo erumpentibus, sphaeroideis, 200-250  $\mu$  diam., atris, opacis, ostiolo minuto, abrupte papillato vel breviter cylindraceo, excipulo tenui-membranaceo, indistincte pseudoparenchymatico, fulvo-atro, prope basim hyphulis perithecio brevioribus, fulvo-ferrugineis, septulatis parce cineto; ascis anguste clavatis, apice rotundatis ibique tunica leniter incrassata, basi brevissime crasseque pedicellatis, 90-100  $\times$  10-11; sporidiis typice imbricatodistichis, raro subtristichis, cylindraceo-fusoideis, rectis vel curvulis, utrinque attenuatis, 4-septatis, ad septa non constrictis, loculo secundo distincte inflatulo, extimis longioribus, omnibus guttulam minutam praebentibus, flavo-citrinis,  $28-34 \times 4-5,5$ .

Hab. in caule sicco Salvia e glutinosa e (Labiatae), supra Valpelline (Valle d'Aosta, Ital. bor.) alt. 1200 m. — Affinis L. Niessleanae Rabh., L. oreophilae Sacc. et L. oreophilaidi Sacc. et Penz., quae sec. Auct., potius ut varietates unius speciei habendae sunt.

22. Leptosphaeria Cinnamomi Shirai et Hara, Botan. Magaz. Tokyo 6551 XXV (1911) p. 72, tab. 2 fig. 21-23. — Maculis initio minutis, rotundatis, brunneis, dein latioribus saepeque confluentibus, arescendo griseis; peritheciis subepidermicis, immersis, globosis vel hemisphaericis, demum ostiolo papillulato vix erumpentibus, membranaceis, obscure brunneis, 120-150  $\mu$  altis, 130-170, raro usque ad 200  $\mu$  latis; ascis clavatis vel cylindraceis, octosporis, 75-90  $\times$  8-11, paraphysibus filiformibus, 1  $\mu$  cr., hyalinis, ascos aequantibus vel vix brevioribus; sporidiis monostichis vel distichis, fusiformibus vel ellipsoideis, 5-septatis, ad septa constrictis vel non, e hyalino luteo-brunneis, 20-28  $\times$  4-5.

Hab. in ramulis junioribus C i n n a m o m i C a m p h o r a e (Lauraceae), cui noxia, Prov. Musashi, Komaba prope Tokyo, Japonia (K. HARA).

23. Leptosphaeria Riofrioi Gonz. Fragoso, Mem. R. Soc. Españ. Hist. 6552 Nat. t. 11., 1919, 3., p. 92. — Peritheciis globosis vel oblongis, 150-300 μ, atris, tectis, demum erumpentibus, papillulatis, poro pertusis, contextu atro-fuligineo, pseudoparenchymatico, hymenio flavido-fuligineo; ascis rectis, curvulisve, oblongo-claviformibus, parietibus crassiusculis praeditis, apice rotundatis, breviter pedicellatis, plerumque 60-70 × 14-16, paraphysibus non visis; sporidiis irregulariter distichis vel submonostichis, subfusoideis, 18-24 × 4,5, utrinque attenuato-obtusis, primum hyalinis, guttulatis, denique

pallide fuligineis, 5-septatis.

Hab. in caulibus ramulisque siccis Coronilla e Emeri (Leguminosae), prope Barcelona, Montserrat, Hispania Nord. or. (Fz. Riofrio).

24. Leptosphaeria indica Syd. et Butl., Ann. Mycol. IX, 1911, p. 409.— 6553 Peritheciis sparsis, minutissimis, immersis, 100-150 μ diam., levibus, atris, ostiolatis, papilla minuta erumpente; ascis cylindraceoclavatis, subsessilibus, 65-72 × 14, octosporis; sporidiis elongatis, subfusoideis, curvulis, utrinque plerumque obtusis, 3-7-(plerumque 5-)-septatis, haud constrictis, flavidis, 25-40 × 5-7.

Hab. in foliis caulibusque languescentibus Asparagi sp. (Liliaceae), Wynaad, Indiae or. (W. Mc RAE).— Ab aliis speciebus, in Asparago vigentibus diversa.

25. Leptosphaeria catalaunica Gz. Frag., Flor. Microm. Catal. 1917, 6554 p. 89, fig. 14.— Peritheciis sparsis v. parce gregariis, subcutaneo-erumpentibus globosis v. globoso-oblongis, 300 μ diam. nigris, ostiolo vix prominulo; contextu parenchymatico fuligineo; ascis clavatis 60-90 × 16-20, apice crassiusculo rotundato, breviter pedicellatis, filiformi-paraphysatis; sporidiis irregulariter distichis v. conglobatis, fusoideis, curvulis -28 × 9, utrinque tenuatis, 5-8-septatis, primo hyalinis, non constrictis, grosse guttulatis, dein flavidulis, constrictis, plerumque eguttulatis.

Hab. in ramulis tenellis S m i l a c i s a s p e r a e (Liliaceae), Tibidabo prope Barcelona, Hispaniae (CABALLERO).

26. Leptosphaeria Smilacis Petch, Ann. R. Bot. Gard. Peradeniya, v. 6555 VI, P. III, 1917, p. 225. — Peritheciis erumpentibus, tandem superficialibus, ad 0,4 mm. diam., globosis, ostiolo acuto nigro, alibi viridi-flavis granulosis vel rugosis, brunnescentibus, tandem nigris, sparsis vel 4-6 congregatis; ascis clavatis, breviter pedicellatis, truncatis, supra pariete incrassato, 100-135 ≈ 12, sporis distichis anguste ovoideis, subcurvatis, triseptatis, leniter constrictis, 20-25 ≈ 4,5-5.

Hab. in S m i l a x a s p e r a (Liliaceae), et cladomanias efformans, Hakgala, Ceylon.

27 Leptosphaeria Marantae Sydow, Ann. Mycol. 18., 1920, p. 100.— 6556 Maculae vagae, ex apice foliorum oriundae, tandem partem plus minus magnam folii occupantes, albido-ochraceae; perithecia hypophylla, copiosa, gregaria, immersa, vertice parum erumpentia, 120-160 μ diam., applanato-globosa, atra, ostiolo brevi conico, submembranacea, contextu minute parenchymatico; asci cylindraceo-cla-

vati, ad apicem rotundati, brevissime stipitati,  $40-55 \times 9-13$ , octospori, paraphysati; sporae distichae, oblongae, utrinque rotundatae, intense fusco-olivaceae, 2-septatae,  $13-16 \times 3,5-4$ , cellula media saepe leniter crassiore.

Hab. in foliis vivis vel subvivis Marantae ar un din aceae (Marantaceae), Los Baños, prov. Laguna, Ins. Philipp. (T. COLLADO).

- 28. Leptosphaeria Fici-elasticae Petrak, Ann. Mycol. 14., 1916, p. 164.— 6557
  Peritheciis late dispersis plerumque epiphyllis, raro hypophyllis, secus nervos saepe magis aggregatis, subgregariis, epidermide tectis, globoso depressis vel fere lenticularibus, ostiolis brevissime conicis pertusis erumpentibus fusco nigris 100-160 μ diam.; ascis cylindraceo-clavatis, basin versus parum attenuatis, breviter stipitatis, apice rotundatis, 60-70 × 8-12, octosporis, sporidiis 1-1,5-stichis, cylindraceo-fusoideis utrinque obtusulis, bi-vel tripartitis, ad septa parum constrictis, rectis vel parum curvulis; paraphysibus filiformibus tenuissimis ascis parum brevioribus vel fere aequilongis.
  - \*Hab. in foliis emortuis Fici elasticae (Moraceae), in hortis M. Weisskirchen, Moraviae.
- 29. Leptosphaeria Quamoclidii Ch. E. Fairman, Mycologia 10., 1918, 6558 p. 246. Peritheciis sparsis, globosis v. globoso conoideis, ostiolo minuto papilliformi praeditis, nigris, 200-250 μ diam.; ascis cylindraceis apice rotundatis, breviter stipitatis octosporis, 80-100 × 7; sporidiis monostichis, oblongo-fusoideis 3-septatis, septa constrictulis, 4-guttulatis, 13-17 × 6, brunneis.

Hab. in caulibus vetustis Q u a m o c l i d i i m u l t i f l o r i (Nyctaginaceae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

30. Leptosphaeria Onagrae Rehm, Ann. Mycol. XI, 1913, p. 398. — 6559 Perithecia late gregaria, in cortice nidulantia, mox prorumpentia, denique in ligno saepe dilute denigrato sessilia, globulosa, minutissime papillulata, atra, glabra, 0,2,5 mm. diam., subcarbonacea; asci clavati, apice rotundati, 80 × 12, 8-spori; sporae oblongo subclavatae, apice superiore rotundatae, rectae, transverse 3-septatae, cellula secunda paullulum latiore, ad septa constrictae, dilute flavidulae, -30 × 6-7, distichae. Paraphyses filiformes.

Hab. ad caules emortuos On agrae strigosae (Onagraceae), Kulm N. Dak., America bor. (J. B. Brenckle).— Characteribus sporidiorum Leptosphaeriae Euphorbiae Niessl proxima.

31. Leptosphaeria Staritzii P. Henn. ap. Staritz, Verh. Bot. Ver. Bran- 656

denb. LV (1913) p. 78. — Peritheciis subepidermicis, dein liberis, globoso-depressiusculis; ascis ellipsoideo-oblongis, interdum breviter clavatis, subsessilibus, 60-75 × 6-8; sporidiis plerumque 3-locularibus, partim etiam 2-locularibus, eguttulatis, 16-20 × 5-5,5, ad septa vix constrictis, brunneis, loculo mediano minore, extimis rotundatis apicibus in cellulis attenuatis protractis.

Hab. in caulibus emortuis Armeriae vulgaris (Plumbaginaceae), Kühnauer Park, Anhalt, Germania.

32. Leptosphaeria houseana Sacc., Ann. Mycol. XIII, 1915 p. 116.— 6561 Peritheciis gregariis, subcutaneo-erampentibus, 4/5 mm. diam., globulosis, dein depressis et leviter umbilicatis, vix papillatis, nigris; ascis tereti-oblongis, brevissime stipitatis, apice rotundatis, 70-75 × 14-15, obsolete paraphysatis, octosporis; sporidiis distichis v. partim monostichis, ellipsoideo oblongis, utrinque rotundatis, saepius leviter curvulis, 3-septatis, non v. vix constrictis, varie guttulatis, 16-19 \* 8-9,5, ochraceo-viridulis.

Hab. in caulibus emortuis Thalictri dioici (Ranunculaceae), Albany, Amer. bor. (House).— Affinis Lept. Solani et Lept. sociali sed sporidis crassioribus obtuse rotundatis, matrice aliena etc. distincta.

33. Leptosphaeria pachytheca Sacc., Nuovo Giorn. bot. it. N. S. v. XXII, 6562 1915, p. 39.— Peritheciis laxe gregariis globosis, subcutaneo-erumpentibus, nigris, 260-270 µ diam., vix papillatis; ascis crasse fusoideis, apice obtusulis, subsessilibus, copiose filiformi-paraphysatis, 60-80 × 22-26, octosporis; sporidiis subtristichis oblongo-fusoideis, utrinque obtusulis, 3-septatis, ad septa, praecipue medium constrictis,  $28 \times 9.5-11$ , fuligineis, 4-guttatis.

Hab. in ramis emortuis Amygdali communis (Rosaceae), Boschetto, in Insula Melita. — Sporidia initio hyalina, minute 4-guttulata.

34. Leptosphaeria Pruni Woronichin, Monit. Jard. Bot. Tiflis XXVIII 6563 (1913), p. 17. — Maculis minutis, albidis, rotundatis vel angulatis, 1-2 mm. diam., saepe confluentibus, dein perforatis; peritheciis hypophyllis, immersis, 135-150 μ diam.; ascis late fusoideis, apice rotundatis, 50-55 \* 11-12, paraphysibus filiformibus obvallatis; sporidiis subdistichis, utrinque rotundatis, 2-septatis, brunneis, 14-18 \* 4-5, cellula media leviter tumescente, inferiore nonnamquam leviter angustata.

Hab. in foliis vivis Pruni domesticae (Rosaccae), in Caucaso. -- A L. concentrica Ell. et Sr. differt, praeter matricem,

magnitudine ascorum et sporarum nec non macularum.

35. Leptosphaeria coffaeicida Spegaz., Fungi Costaric. nonn., in Bol. 6564 Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 198. — Maculae utrinque manifestae sed praecipue ad epiphyllum perspicuae, orbiculares determinatae, centro candidae pellucidae, ambitu primo rufescentes dein subcinerascentes, ultra fines areola infuscato-subferruginea plus minusve lata indeterminata cinctae; perithecia in centro candido ad epiphyllum evoluta, pusilla, 100-125 μ, laxe gregaria, primo epidermide tecta dein erumpenti-prominula, lenticularia, minute papillulato-ostiolata, glabra, atra; asci cylindracei, antice obtusissimi crasseque tunicati lumineque unifoveolati, deorsum cuneati in pedicello brevi crassiusculoque producti, paraphysibus filiformibus parum longioribus commixti, 8-spori, 50-60 × 10; sporae fusoideo-lineares utrinque acutiusculae, primo 3-, serius 5-, septatae, ad septum medium constrictulae, diu hyalinae, postremo plus minusve hyalinae, 20 × 4-6.

Hab. ad folia viva C offeae sp. (Rubiaceae), in agris prope Tuis Costarica, America trop.

36. Leptosphaeria Tonduzi Spegaz., Fungi Costaric. nonn. in Bol. Ac. 6565 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 200.— Maculae amphigenae marginales late diffusae difformes sed ambitu rotundatae, totae opacae cinereo-ferrugineae; perithecia hypophylla laxe gregaria, erumpentia, sublenticularia, umbonatulo-ostiolata, coriaceo-submembranacea minuta fulvella glabra, 150-200 μ diam.; asci subcylindracei, apice subtruncato-rotundati, deorsum attenuati ac pedicello brevi crassiusculo fulti octospori, parce longe tenuiterque paraphysati, 70-75 × 10-12; sporae subelliptico-fusoideae, primo hyalinae didymae, loculis grosse biguttulatis atque tunica mucosa concolori, utrinque in appendice concoidea producta, vestitae, serius nudae, 3-septatae ad septa leniter constrictae, fuligineae, loculis 2 mediis obscurioribus, 2 extimis conoideis subobtusiusculis.

Hab. in foliis vivis C of f e a e sp. (Rubiaceae), in agris prope Tuis Costarica, America trop.

37. Leptosphaeria icositana Maire, Bull. Soc. H. N. de l'Afr. du Nord, 6566 1917, p. 170. — Peritheciis sparsis, immersis, nigris, subglobosis, 200-300 μ diam., calvis, ostiolo papillato; ascis octosporis, subcylindraceis, 90-100 × 8-9, filiformi-paraphysatis; sporidiis dilute olivaceis, fusoideis 3- demum 5-septatis, ad septa constrictulis, levibus, 18-27 × 5-7.

Hab. in caulibus emortuis Rubiae peregrinae (Ru-

biaceae), prope Icosium (Alger) in Mauretania, Afr. bor. — An diversa a Lept. Bornmülleri sed foliicola?

38. Leptosphaeria Caballeroi Gonz. Fragoso, Mem. R. Soc. Españ. Hist. 6567 Nat. t. 11., 1919, 3., p. 90.— Peritheciis numerosis, sparsis vel gregariis, primum tectis, dein erumpentibus, atris, globosis, usque 150 μ diam., basi immersis, vix papillatis, contextu pseudoparenchymatico, membranaceo, ostiolo regulariter pertuso praeditis; ascis oblongo-clavatis, usque 65 × 15, in pedicellum brevem attenuatis, paraphysatis; sporidiis distichis, primum hyalinis, denique flavidulis, fusoideis, 14-15 × 4-5,5, rectis vel leniter curvulis, utrinque obtusis, 3-septatis non constrictis, loculis guttulatis.

Hab. in caulibus siccis Daturae Stramonii (Solanaceae), in Hort. bot. Univers. barcinonensis, Hispania Nord. or. (A. CABALLERO).

39. Leptosphaeria Solani Romell in Herb. Sacc. et in Berlese Icon. 6568 Fung. I p. 63, t. 49 f. 6 (1892) non Ell. et Ev. (1893). — Peritheciis sparsis, \(^1/\_3\) mm. diam., depresse conoideis, subcutaneo-erumpentibus, nigris; ascis tereti-clavatis \(^75-85 \times 9-11\), breviter noduloso-stipitatis octosporis; sporidiis distichis, oblongis, utrinque obtusulis, 3-septatis, leniter constrictis, olivaceo-melleis.

Hab. in caulibus Solani Dulcamarae (Solanaceae), pr. Visley Gotlandiae, Suecia (ROMELL). — A Lept. sociali peritheciis multo majoribus imprimis differt.

- Leptosphaeria solanicola Sacc. nom. nov. Ita vocanda est di-6569 versa Lept. Solani Ell. et Ev. (1893) non Romell. apud Berl. Icon. Fung. (1892).
- 41. Leptosphaeria insulana Sacc., Nuovo Giorn. bot. it. N. S. v. XXII, 6570 1915, p. 39.— Peritheciis gregariis, saepius lineatis, erumpentibus, nigris, globulosis, 170-190 μ diam., poro pertusis, contextu minute celluloso, badio-fuligineo; ascis tereti-fusoideis subsessilibus, utrinque acutulis, 45-50 × 6-7, octosporis; sporidiis subdistichis, fusoideis, rectis, 3-septatis, ad septa leviter constrictis, 12-14 × 3,5-3,7, olivaceis, eguttulatis.

Hab. in caulibus emortuis Antirrhini siculi (Scrophulariaceae), Addolorata, Ins. Melita. — Affinis Lept. Hendersoniae (Ell.) Berl. sed clypeus stromaticus nullus.

42. Leptosphaeria Galiorum Sacc.— Syll. II p. 22.— subsp. L. Antirr- 6571 hini Sacc., Nuovo Giorn. Bot. it. N. S. v. XXII, 1915, p. 38.— A typo differt sporidiis paullo brevioribus, peritheciis saepe lineatis et nonnumquam oblongatis; peritheciis 200-300 μ long. minute pa-

pillatis, contextu dense minuteque celluloso; ascis 90-100 × 10-12 filiformi-paraphysatis, 8-sporis, sporidiis oblique monostichis, v. distichis, tereti-oblongis; utrinque rotundatis, 3-septatis, leniter constrictis, 18-21 × 7-7,5 (in typo 20-23 µ long.) badio-fulvis, eguttatis.

Hab. in caulibus Antirrhini siculi (Scrophulariaceae). Addolorata, Ins. Melita.

43. Leptosphaeria crozalsiana R. Maire, Ann. Mycol. XI, 1913, p. 352. 6572 Peritheciis 0,25 mm. diam., subglobosis, immersis demum plus minusve erumpentibus, atris, ostiolo minute papillato; ascis ellipsojdeis, 70-75 × 36-45, octosporis; sporidiis polystichis oblongo-ellipsoideis, olivaceo-brunneis, 3-septatis, ad septa constrictis, 35-45 × 10; paraphysibus filiformibus ramosis.

Hab. in ramis emortuis Tamaricis sp. (Tamaricaceae), prope Oran, Algeria (DE CROZALS). - L. personatae Niess. et L. Silenes-acaulis De Not. affinis.

44. Leptosphaeria priuscheggiana Petrak, Ann. Mycol. 16., 1918, p. 6573 225. — Peritheciis in maculis Asteromatis Tiliae Rud. nidulantibus hypophyllis, sparsis vel subgregariis, epidermide tectis, subglobosis vel globoso-lenticularibus brunneis ostiolo nigrescenti brevissime conico pertusis, 170-220 µ diam.; ascis clavatis, v. oblongo-clavatis basim versus paullatim angustatis, apice rotundatis vel abrupte attenuatis, obtusis, sessilibus vel brevissime stipitatis, 80-85 × 12-15, octosporis; sporidiis distichis, basin versus saepe monostichis, fusoideis utrinque obtusulis, 4-5-septatis, ad septa manifeste constrictis, guttulas 5-6 includentibus, raro rectis, plus minusve curvulis, 23-32 × 6-7, fusco-olivaceis; paraphysibus filiformibus tenuissimis, ascis brevioribus.

Hab. in foliis putrescentibus Tilia e (Tiliaceae), in silvis prope pagum « Podhorce » ad urbem « Stryj », Galiciae meridionali orientalis, Europa media.

45. Leptosphaeria ranunculoides Noelli, Nuovo Giorn. bot. it. N. S. v. 6574 XIX, p. 403 fig. 3. - Peritheciis sparsis, subcutaneis, atris, globosis, ostiolatis, circa 300 µ diam.; ascis cylindraceis basi attenuatis, supra rotundatis 84-96-116 × 9-79, paraphysatis; paraphysibus elongatis, supra curvulis; sporidiis distichis ellipsoideo-cylindraceis, obtusis, fuligineis, 6-8-septatis, uno ex loculis intermediis inflatoguttulatis, ad septum non constrictis, 16-19 \* 4-4,45.

Hab. in caulibus Bupleuri ranunculoidis (Umbelliferae), Colle Sautrom, Vallis Maira, Italiae bor. — A Lept. Bupleuri Syd., ascis paraphysatis, sporidiis minoribus magis septatis etc. diversa.

46. Leptosphaeria Rostrupii J. Lind, Ann. Mycol. XIII, 1915, p. 17, fig. 1.— Vestergren, Microm. rar. sel.— Peritheciis sparsis vel gregariis primo sub epidermide maculiformiter dealbata nidulantibus, dein liberatis, epidermide fissa cinctis, globosis, 0,5 mm. diam., atro-fuscis, glabris, coriaceis, ostiolo punetiformi prominulo; ascis oblonge clavatis, basi breve stipitatis, vertice rotundatis, 109-142 × 13-16, octosporis, paraphysibus numerosis, filiformibus, hyalinis, septatis, 4 μ crassis obvallatis; sporidiis oblique monostichis, oblonge fusoideis, utrinque conicis, saepe inaequilateralibus, 3-septatis, ad sepimenta valde constrictis, 25-29 × 8-10, griseo-fuscescentibus.

Hab. in Dauco Carota (Umbelliferae), cui noxia, Germania sept. et Dania. — Status ascophorus Phomatis Rostrupii Sacc.

47. Leptosphaeria Simmonsii Sacc., Nuovo Giorn. bot. it. v. XXVII, 6575 1920, p. 77. — Peritheciis longe et dense gregariis, erumpenti-superficialibus, nigris, nitidulis coriacellis, irregulariter globoso-conoideis, 170-190 μ cr. 210-250 μ alt. obtuse papillatis; contextu parenchymatico firmo, atro-castaneo; ascis cylindraceis, apice obtusulis, breviter stipitatis, filiformi-paraphysatis, 130-135 × 12-13, octosporis; sporidiis anguste fusoideis, saepe curvulis dilute flavidis, 3-septatis vix constrictis, 35-40 × 4,5-5.

Hab. in caulibus emortuis H e r a c l e i l a n a t i (Umbelliferae), Spokane Washington, Amer. bor. (V. Simmons).— Affinis Lept. Doliolo, Lept. subconicae etc., sed peritheciis densissimis, irregularibus, minoribus, sporidiis longioribus distinguenda.

48. Leptosphaeria foliicola Naoumoff, Champ. Oural. I (1915) p. 21 t. I 6576 fig. 4.— Maculis albis angulosis, 1,5-3 mm. diam., amphigenis, partim internerviis; peritheciis globosis, subpapillatis, nigris, 2-3-aggregatis, contextu 15 μ cr., e cellulis irregulariter cuboideo-angulosis, 5,5 μ diam. fuligineis efformato; ascis fere sessilibus teretiusculis, apice rotundatis, octosporis, 75-85 × 12-14, paraphysatis; sporidiis distichis, 6-7-septatis, loculo 3° leniter incrassato, 27-30 × 4,3, fusoideo-elongatis, utrinque attenuatis, obtusulis, pallide brunneis.

Hab. in foliis vivis Libanotidis montanae (Umbelliferae), in Monte Sugomak, Perm Ural, Rossia.

49. Leptosphaeria octophragmia Trav. et Fragoso in Traverso, Bull. 6577 Soc. bot. it. 1915, p. 23.— Peritheciis dense sparsis, immersis dein erumpentibus, parum prominulis, nigris, opacis, levibus, globosis, <sup>1</sup>/<sub>4</sub>

mm. circ. diam., ostiolo applanato vel vix papillulato, excipulo minute pseudoparenchymatico, castaneo-fuligineo; ascis copiosis, eximie clavato-elongatis,  $75\text{-}90 \approx 12\text{-}14$ , distincte sed breviter pedicellatis (pedicello  $20~\mu$  circ. longo), tunica aequali nec apice incrassata; paraphysibus filiformibus, tenuibus, ascos subaequantibus, facile diffluentibus; sporidiis irregulariter distichis, cylindraceis vel cylindraceo-fusoideis, utrinque late rotundatis, haud raro parum curvatis, luteo-fulvidulis, typice 8-septatis, rarissime septa 7 vel 9 praebentibus, ad septa constrictulis,  $25\text{-}30 \approx 6\text{-}7$ , loculis extimis longioribus, conoideo-rotundatis, caeteris discoideis, omnibus centro 1-guttulatis.

Hab. in caulibus siccis Aloysiae citriodorae (Verbenaceae), prope Castillo de las Guardas, Sevilla (in hortis culta) (R. GONZALES FRAGOSO).

50. Leptosphaeria ambiens Rehm, Ascomyc. Philipp. II, in Phylipp. 6578 Journ. of Sci. VIII (1913) p. 257.— Peritheciis ramulum longe dilute fuscidulum ambientibus, innumerabiliter gregarie cortici interiori innatis, epidermidem vix protuberantibus, ostiolis minimis prominentibus nigris punctulantibus, globulosis, atris, 150 μ diam., parenchymatice fusce contextis, ad basim hyphis simplicibus, fuscis, septatis, 3 μ crassis obsessis; ascis clavatis, teneris, 40-45 × 8-9, paraphysibus filiformibus tenuibus obvallatis; sporidiis distichis, oblongo-clavatis, utrinque obtusis, primitus medio-dein 3-septatis, vix constrictis, rectis, fuscis, 12 × 4.

Hab. in ramulis emortnis?, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. Baker). — Videtur L. sabalincolae (E. et E.) Sacc. affinis, sed ex speciminibus americanis omnino diversa.

- II. Subg. Leptosphaerella Sacc. Species foliicolae et plerumque maculicolae et aparaphysatae (incl. gen. Phaeosphaeria Miyake).
- 51. Leptosphaeria Matisiae P. Henn., Hedw. vol. 48. (1908) p. 107 (corr. 6579 L. Matiaiae). Maculis effusis fuscidulis, dein pallide exaridis; peritheciis gregariis vel sparsis, subglobulosis, membranaceis, atris, 70-80 μ diam.; ascis clavatis, obtusis, octosporis, 30-40 × 5-7; sporidiis oblongis, obtusis, 3-septatis, haud constrictis fusco-brunneis, 12-14 × 3,5-4.

Hab. in foliis Matisiae paraënsis (Bombacaceae), hort. bot. Goeldi, Parà (BAKER). — Sociis Phyllostictae et Colletotrichi sp. — Genus matricis verisimiliter Matisia nec Ma

tiaia ut scribet Auctor et tunc fungus Lept. Matisiae nec Matiaiae vocandus.

52. Leptosphaeria sabauda Speg. — Syll. II, 47 — Arvaticae Gz. Frag. 6580 in Trab. Mus. Nac. Cienc. Nat., ser. Bot. n. 4 (1914) p. 17 extr., fig. 6. — Peritheciis epiphyllis, rarius hypophyllis, minutis, 150 μ circ. diam., membranaceis, globosis, atris, numerosis, sparsis, contextu fuligineo; ascis cylindraceo-clavatis, apice obtusis, vel subfusoideis, rectis vel curvulis, subsessilibus, usque ad 60 × 16, aparaphysatis (?); sporidiis distichis vel subtristichis, cylindraceo-fusoideis vel clavatis, utrinque rotundatis, 22-25 × 5-6, olivaceis, 3-septatis, 4 guttulatis.

Hab. in foliis emortuis vel putridis Silenes arvaticae = S. ciliata var. arvatica (Caryophyllaceae), in montibus Carpetanis, Hispania.

53. Leptosphaeria Cucurbitae Montemartini, Riv. Patol. Veg. VIII, 6581 1916, p. 185. — Maculis exaridis albidis, 2-3 mm. diam.; peritheciis punctiformibus, immersis, late ostiolatis, rotundatis vel lenticularibus, 100-110 × 80; ascis clavatis, octosporis, paraphysibus indistinctis; sporidiis fusoideo-falcatis, fuscidulis, 20 × 4, 3-septatis.

Hab. in foliis vivis C u c u r b i t a e P e p o n i s (Cucurbitaceae), Montubeccaria (prov. Papiae), It. bor. socia Cercosp. Cucurbitae, Phyllostictae Cucurbitacearum, Ascochytae sp. et Septoriae Cucurbitae.

54. Leptosphaeria folliculata Ell. et Ev. — Syll. IX p. 789 — var. oxy-6582 spora Davis, Trans. Wiscons. Acad. XVIII p. 87 (1915). — A typo imprimis differt ascis angustioribus,  $50 \times 8$ , et sporidiis acutis, 3-septatis,  $15 \times 3$ .

Hab. in foliis Caricis gracillimae (Cyperaceae), Price Co. Wisc., Amer. bor.

55. Leptosphaeria Arrhenatheri House — Sacc. Syll. XIV p.570 — var. 6583 italica Massa in Ferraris e Massa, Ann. Mycol. X, 1912, p. 287.— A typo differt ascis et sporidiis brevioribus (ascis 50 × 9, sporidiis 18-20 × 4).

Hab. in foliis Arrhenatheri elatioris (Gramina-ceae), Alba, Italia bor.

56. Leptosphaeria Bambusae (Miy. et Ha.) Sacc., Phaeosphaeria Bambusae Miyake et Hara, Stud. üb. Pilze Bambus. (japon.) in litt. VI, 1912. — Botan. Mag. Tokyo 1910, pp. 340-341. — Tanaka, Mycologia 1922, p. 86 (Syll. XXII p. 215, diagn. nulla).— Foliicola. Maculis in venis insidentibus saepe indefinitis, brunneis v. obscure coloratis dein e medio griseis v. fuscis, demum totum folium te-

gentibus; pycnidiis immersis (Phyllosticta) globosis v. depresse globosis, apice ostiolatis, 100-140 × 70-100; sporulis maturis in cirrhum exheuntibus, ellipsoideis v. cylindraceis, hyalinis, 2-2,5 × 1. 1-3; peritheciis minute punctiformibus, sparsis v. nervicolis, immersis, globosis v. globoso-depressis, nigris, 120-170 × 140-210), parietibus tenuibus obscuris v. fuscis, apice ostiolatis; ascis numerosis, fasciculatis, clavatis v. cylindraceis, 65-90 × 18-27, octosporis, aparaphysatis; sporis distichis v. irregularibus, fusoideis v. ellipsoideis, rectis v. curvulis, triseptatis, ad septa constrictis, juventute hyalinis et granulosis, aetate obscuris, 25-30 × 10-12.

Hab. in foliis vivis Arundinariae Simoni et Sasae paniculatae (Graminaceae), Japonia, Komaba, Tokyo (D. KARASHIMA), Nikko et Kavauye-Mura (HARA).

57. Leptosphaeria lagenoides Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6585 Buenos Aires XXIII p. 57 (1912). - Maculis nullis; peritheciis hine inde laxe gregariis, parenchymate innatis, vix ostiolis crassis, exsertis manifestis, subglobosis, 150-200 µ diam., tenuissime membranaceis, contextu minutissime parenchymatico fusco-olivascente; ascis fusoideis, brevissime pedicellatis, aparaphysatis, octosporis, 110-130 × 10-12; sporidiis distichis, fusiformibus, leniter inaequilateris, utrinque obtusiuscule acutatis, primo grosse 8-guttulatis dein 7-septatis, 38-40 × 5-6, ad septum medium tantum constrictis.

Hab. in vaginis aridis putrescentibus Elymi barbati (Graminaceae), in rupestribus Potrerillos prope Mendoza, Argentina.

58. Leptosphaeria fuscidula Pass. - Syll. IX, p. 793. - f. Magnolii Gonz. 6586 Frag., Flor. Hispal. Microm. in Trab. Mus. Nac. de Cienc. Nat. Madrid, Ser. Bot. n. 10, 1916, p. 88. - Peritheciis sparsis vel seriatis, in maculis albicantibus; ascis cylindraceis, aparaphysatis, 60-70 × 10-12; sporidiis distichis, chlorinis vel pallide olivaceis, fusiformibus, 3-septatis, raris 4-septatis, non constrictis, 18-22 × 5-6.

Hab. in foliis languidis vel siccis Melicae Magnolii (Graminaceae), prope Castillo de las Guardas, Sevilla (Hispania).

59. Leptosphaeria oryzina Sacc., Notae Mycol. XXIII p. 67 (Accad. 6587 Veneto-trent. 1917).— Peritheciis glumicolis, subsparsis, punctiformibus, nigris, subglobosis; ascis aparaphysatis, tereti-fusoideis, 40 × 7, subsessilibus, octosporis; sporidiis distichis, fusoideis, leviter curvis, utrinque obtusulis, 16 > 3, tenuiter 3-septatis, brunneis.

Hab. in glumis emortuis Oryzae sativae (Graminaceae), Los Baños, Ins. Philipp. - Specimina non omnino matura, hinc species ulterius inquirenda.

60. Leptosphaeria culmicola (Fr.) Karst. - Sacc., Syll. II p. 70. - var. 6588 hispalensis Gonz. Frag., Flor. Hispal. Microm. in Trab. Mus. Nac. de Cienc. Nat. Madrid, Ser. Bot. n. 10, 1916, p. 87. - Peritheciis minutis innatis, sparsis; ascis usque 85 \* 12; sporidiis flavidis, 4septatis, raris 5-septatis, loculo secundo protuberante,  $24-25 \times 6-7$ .

Hab. in foliis vaginisque siecis Phragmitis commun i s (Graminaceae), prope Hispalis (Sevilla), Hispania. — Var. rhi-

zomatum Sacc., proxima.

61. Leptosphaeria Hermodaetyli Ferraris in Ferr. e Massa, Ann. My. 6589 col. X, 1912, p. 287, tav. IV fig. 5,1-3 — Peritheeiis subepidermicis, globosis, perforatis; ascis numerosis, 60.70 \* 10, apice rotundatis, basi attenuatis, aparaphysatis; sporidiis distichis, brunneis, fusoideis, obtusis, valde ad septum medianum constrictis, 3-septatis, 19-25 \* 5.

Hab. in foliis Hermodaetyli tuberosi (Iridaceae),

Avellino, Italiae merid.

62. Leptosphaeria Coniothyrium Sacc. — Syll. II p. 29 — var. foliicola 6590 Woronichin, Monit. Jard. Bot. Tiflis XXVIII (1913) p. 17. — Maculis albidis, angulatis, nervis limitatis, 2-4 mm. diam., zona obscure brunnea cinctis; peritheciis, amphigenis, praecipue tamen hypophyllis, globosis, 220-240  $\mu$  diam.; ascis cylindraceis, 48-50 \* 6-7; sporidiis subdistichis, fusoideis, 3-septatis, dilute olivaceis, 13-16 \*3,5-4,5.

Hab. in foliis vivis Lauri regalis (Lauraceae), socio Co-

niothyrio Fuckelii Sace., in Caucaso.

63. Leptosphaeria ruscicola Karst. et Har. - Sacc., Syll. IX p. 785. - 6591 f. cladodiicola Gonz. Frag., Flor. Hispal. Microm., in Trab. Mus. Nac. Cienc. Nat. Madrid Ser. Bot. n. 10, 1916, p. 90. — Peritheciis usque 200 μ diam., numerosis, in maculis aridis; ascosporis irregulariter subdistichis, elongatis, utrinque rotundatis, loculo secundo inflato, flavescentibus, 3-4 septatis, 18-24 × 4,5-5. — A typo satis diversa; cum Leptosphaeria Rusci (Wallr.) Sacc. var. Hypophylli Maire non comparanda.

Hab. in cladodiis emortuis Rusci aculeati (Liliaceae), prope Costantina Sevilla, Hispania (PROF. DE LAS BARRAS).

64. Leptosphaeria pacifica Rehm, Ann. Mycol. IX, 1911, p. 364. - Pe. 6592 rithecia gregaria, innata, globulosa, minutissime papillulata, poro vix conspicuo pertusa, nigra prorumpentia, glabra, parenchymatice nigro-fusce contexta, 0.2 mm. diam.; asci oblongo-clavati,  $70 \times 10$ -14, octospori; sporae subclavatae, duo-dein quadrilocularibus, medio

constrictae, subfuscae, 20 × 7-9, distichae; paraphyses?.

Hab. in foliis Juccae Colusplei (Liliaceae), Montes prope Claremont, Los Angeles, S. California, U. S. America (BAKER). — A L. filamentosa E. et E. sporis plane diversa.

65. Leptosphaeria cannabina Ferraris e Massa, Ann. Mycol. X, 1912, 6593 p. 286, tav. IV fig. 3,<sup>1-4</sup>. — Maculis irregularibus, initio ochraceis dein centro late albicantibus ochraceo-marginatis 3-5 mm. diam.; peritheciis epiphyllis, parvulis, nigrescentibus, paucis, 130-140 μ diam., membranaceis, distincte perforatis; ascis numerosis, aparaphysatis, clavatis, rectis v. leniter curvulis, apice rotundatis, basi brevissime constricto-pedicellatis, 45-50 × 7-10; sporidiis subdistichis, melleis, fusiformibus, suberectis, biseptatis, septis parum constrictis, 19-20 × 5.

Hab. in foliis languentibus C ann abis sativae (Moraceae), Alba, Italia bor. — Verisimiliter status ascophorus Septoriae Cannabis (Lasch) Sace.

66. Leptosphaeria Protearum Sydow, Annales. Mycolog. X, 1912, p. 6594 441. — Maculis amphigenis, distinctis, orbicularibus v. suborbicularibus, 4·10 mm. long., subinde confluendo irregularibus, albescentibus, fusce elevato-marginatis; peritheciis amphigenis, sparsis, epidermide tectis, dein vertice lenissime prominulis, lenticularibus, 175-275  $\mu$  diam., atris inconspicue minuteque papillatis, contextu parenchymatico, opaco, ex cellulis 7·10  $\mu$  diam. composito; ascis fasciculatis, aparaphysatis, saepe curvatis, apice rotundatis, plerumque clavatis, 80·100  $\times$  13·17, cum sporidiis distiche ordinatis, rarius longe cylindraceis usque 200  $\mu$  long. 10·12  $\mu$  cr. cum sporidiis monostiche dispositis; sporidiis octonis, oblongis obtusis, primo 1-septatis et hyalinis, dein 3-septatis et pallide brunneis, ad septum medium leniter constrictis, 18·26  $\times$  5·9.

Hab. in foliis Proteae melaleucae (Proteaceae), Wellington, Cape Prov., Africa austr. (E. M. Doidge).

67. Leptosphaeria Lathonia Sacc. — Syll. II, 48 — var. Hellebori-foe- 6595 tidi C. Massal. in Atti R. Ist. Ven. LXXIV, 2, p. 254. (1914). — Peritheciis epiphyllis, prominulis, nigris, in maculis sordide albidis, zona ferruginea cinctis dense gregariis; ascis 70.80 × 6.8; sporidiis oblique monostichis, fusoideis, triseptatis, ad septa constrictis, loculo subapicali interdum crassiore, e hyalino melleis, 12-16 × 4.5.

Hab. in foliis Hellebori foetidi (Ranunculaceae), prope Tregnago in prov. Veronensi, It. bor. — Forte huc spectat, tam-

quam forma conidica Ramularia Hellebori var. nigricans C. Massal.
68. Leptosphaeria Eriobotryae Syd. et Butl., Ann. Mycol. IX, 1911, 6596
p. 409. — Maculis amphigenis, irregularibus, 1.2 cm. long., saepe
confluendo majoribus et partem plus minus folii majorem occupantibus, pallidis, ochraceis, linea purpurea elevata cinctis; peritheciis epiphyllis, sparsis, globulosis, 130-155 μ diam., omnino immersis, ostiolo etiam immerso papillato; ascis clavatis, 52-65 × 10-12,

Hab. in foliis Eriobotryae japonicae (Rosaceae), Saharanpur, Indiae or. (INAYAT).— Verisimiliter non specifice differt sequens.

octosporis; sporidiis fusiformibus, 6-septatis, flavidis, 20-26 × 3-4,5.

69. Leptosphaeria miyakeana Sacc. n. n., Phaeosphaeria Eriobotryae 6597 Miyake in Bot. Mag. Tokyo XXVII (1913) p. 42, tab. 1 fig. 4·6.— Maculis epiphyllis, irregulariter circularibus, griseis, 2·4 mm. diam.; peritheciis sparsis, initio epidermide tectis dein ostiolo papillato erumpentibus, sphaerioideis, 120·180 × 100·150, atris, crasse pseudoparenchymaticis; ascis cylindraceis, breviter pedicellatis, rectis vel curvulis, octosporis, 66·80 × 9·12; sporidiis irregulariter distichis, fusoideis, rectis vel parum curvatis, typice 5-septatis, rarius 4-septatis, non constrictis, fuscis, 22·28 × 4·5; paraphysibus non visis; pycnidiis (Microdiplodia Miyakei Trav.) peritheciis intermixtis, brunneis, 120 μ diam., poro circulari pertusis; sporulis fusoideis vel cylindraceis, utrinque rotundatis, bicellularibus, fuscis, 10·16 × 4·5.

Hab. in foliis Eriobotryae japonicae (Rosaceae), Quichon, Hupei, China. — Verisimiliter praecedenti nimis affinis.

70. Leptosphaeria Nashi (K. Hara) Sacc., Leptosphaerella Nashi K. Hara, 6598 Morbi arbor. fruct. jap. p. 144, fig. 18. — Maculis minutis, griseis, epiphyllis, dein increscentibus, subcircularibus et arescendo centro dealbatis; peritheciis epiphyllis globosis v. subglobosis, 80-120 μ diam., initio epidermide velatis, membranaceis, contextu cellulis 5-10 μ diam., atro-brunneis; ostiolo papillato; ascis clavato-cylindraceis, apice rotundatis, stipitatis, 8-sporis, 45-52 × 6-7, aparaphysatis; sporidiis biseriatis, fusoideis, 3-septatis, e flavido brunneis, 10-12 × 3-4; pycnidiis perithecio similibus; sporulis ellipsoideis, utrinque rotundatis, hyalinis, 3-4 × 1,5-2.

Hab. in foliis Piri sinensis (Rosaceae), Prov. Mino, Kawauye, Japonia (K. HARA, 1914).

71. Leptosphaeria pusilla (Speg.) Sacc., Leptosphaerella pusilla Spegaz., 6599
Fungi Costaric. nonn., in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919,

Extr. p. 196.— Maculae amphigenae determinatae, 2-10 mm. diam., orbiculares totae opacae, centro albo-cinereae, ambitu obscurae fusco-ferrugineae, extra margines areola flavido-pallescente indefinita latiuscula cinetae; perithecia epiphylla in centro macularum pauca, pusilla, 75 100  $\mu$  diam., epidermide tecta ac vix prominula, latiuscule pertusa, olivacea, membranacea, parenchymatica; asci e cylindraceo obclavati, apice obtuse rotundati, basi breviter crasseque pedicellati, octospori, aparaphysati, 25-40  $\approx$  9-12; sporae oblique distichae v. conglobatae, anguste elliptico-fusoideae, utrinque acutiuscule rotundatae, 5-septatae, ad septum medium tantum leniter constrictae, rectae v. vix inaequilaterales, hyalinae [‡].

Hab. frequens in foliis vivis C of fe a e sp. (Rubiaceae), in agris prope Tuis Costarica, America trop.

72. Leptosphaeria Bornmülleri Jaap, Ann. Mycol. 14., 1916, p. 15. — 6600 Peritheciis sparsis, parcis, subcutaneo erumpentibus, nigris, globosis, 300-350 μ diam.; ascis tereti-clavatis, apice rotundatis, subsessilibus, 70-90 × 12-15, octosporis, serius magis elongatis; sporidiis longe fusoideis, saepius curvulis, inaequilateris, 28-34 × 6,7, initio hyalinis, 4-cellularibus, demum laete flavis et 6-cellularibus, loculis binis submediis brevioribus, non crassioribus, vix constrictis, eguttatis, distichis; paraphysibus filiformibus, copiosis, 2 μ cr.

Hab. in foliis emortuis Rubia e peregrina e (Rubiaceae), in peninsula Lapad pr. Ragusam Dalm. (Bornmüller).

73. Leptosphaeria fagaricola (Speg.) Sacc., Leptosphaerella fagaricola 6601 Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII p. 56 (1912).— Maculis majusculis, determinatis, amphigenis, arescentibus, sordide fuscescentibus; peritheciis epiphyllis, sparsis vel hine inde densiuscule gregariis, parenchymate immersis, dein erumpentibus, lenticularibus, 100-120  $\mu$  diam., atris, tenuissime membranaceis, ostiolo non vel vix papillato pertusis, contextu parenchymatico parum distincto, olivaceo; ascis subcylindraceis, brevissime crasseque pedicellatis, 35-60  $\times$  12-15, aparaphysatis, rarissime paraphyse uno alterove filiformi commixtis, octosporis; sporidiis oblique distichis, cylindraceis, rectis vel vix inaequilateris, biseptatis, leniter constrictis, primo hyalinis dein fuligineis, 18-20  $\times$  5-6, loculis aequilongis, eguttulatis.

Hab. in foliis languidis Fagarae cujabensis (Rutaceae), in silvis prope Puerto Leòn, Argentina.

74. Leptosphaeria huthiana Staritz, Verh. Bot. Ver. Brandenb., LV 6602 (1913) p. 79. – Peritheciis minutis, laxe sparsis, parenchymate im-

mersis, ostiolo papillulato tantum erumpentibus; ascis ellipsoideoovoideis, basi pedicellato-attenuatis sed non proprie stipitatis (mensuris desunt); sporidiis oblongo-fusoideis, obsolete 4-cellularibus, medio parum constrictis, luteis, curvulis, 36-45 × 4-4,5.

Hab. in foliis S p a r g a n i i r a m o s i (Sparganiaceae), prope Coswig i. A., Anhalt, Germania.

75. Leptosphaeria punctillum Rehm, Ascom. exsice. fasc. 50 n. 1993, 6693 Ann. Mycol. X, 1912, p. 356. — Peritheciis in foliis plane dealbatis numerosissimis, innatis, globulosis, demum papillula vix conspicua emergentibus, 0,1-0,12 mm., glabris, nigritulis, fusce parenchymatice contextis; ascis late ellipsoideis, apice rotundatis, vix stipitatis, 50-60 \* 12-15, octosporis; sporis fusoideis, utrinque acutatis, rectis v. subcurvatis, 5-dein 7-septatis, quaque cellula 1-gutata, medio vix constrictis, nulla cellula prominente, dilute flavidulis, 30-35 \* 56, tristichis; paraphysibus filiformibus, septatis, 1-2,5 μ lat.

Hab. ad folia Typhae latifoliae (Typhaceae), London Ont. Canada, Amer. bor. (DEARNESS).

76. Leptosphaeria ulmicola Massa in Ferraris e Massa, Ann. Mycol. 6604 X, 1912, p. 287, tav. IV, fig. 4,<sup>1-3</sup>. — Maculis variis plerumque irregulariter elongatis, arescendo brunneo-fusco-marginatis et zonis interruptis aurantiacis cinctis, centro aridis et tunc perforatis v. irregulariter laceratis; peritheciis membranaceis paucis, sparsis, in centro griseo macularum, hypophyllis, atris, ostiolo prominulo, plerumque 140 μ diam.; ascis 35-40 ≥ 12, cylindrico-obtusis; sporidiis monostichis, oblique dispositis, fusoideis, fuscis, uno latere magis incurvatis, plerumque 6·7 septatis, ad septa constrictis, pluriguttulatis, 31-35 : 4.

Hab. in foliis Ulmi campestris (Ulmaceae), Alba, Italia bor.

III. Subgen. Xenosphaeria Trev. - Species lichenicolae

77. Leptosphaeria Crozalsii Vouaux, Bull. Soc. Mycol. Fr. 1913, p. 6605 120. — Peritheciis numerosissimis sparsis v. 4-15 gregariis et maculas nigrescentes indeterminatas 1-2 mm. latas efformantibus; immersis apice v.  $^1/_4$  emergentibus, ostiolo umbilicato praeditis, subsphaeroideis v. late ovoideis, nigris, 150-400  $\mu$  latis v. plerumque 200-300  $\mu$ ; contextu obscuro, pseudoparenchymatico, e cellulis valde irregularibus 5-7  $\mu$  cr. et crasse tunicatis quandoque polygoniis quandoque elongatis et sinuosis efformato; mycelio araneoso brun-

neo superficiali quandoque connexis; ascis clavatis breviter pedicellatis, apice late rotundatis, apice tunica crassiori praeditis, 73-90  $\approx$  16-19, primum octosporis dein tetrasporis; paraphysibus numerosis filiformibus, sinuosis, septatis, ramosis et anastomosantibus ascos parum superantibus, 1,50-1,75  $\mu$  cr.; sporidiis primum distichis hyalinis continuis, quandoque uniseptatis, maturis late ellipsoideis, brunneis, triseptato-constrictulis, utrinque latissime rotundatis, loculo mediano submajori, 16-24  $\approx$  7-10,5.

Hab. in thallo Aspiciliae calcareae (Lichenes), «Garigue du Roy», prope Béziers, Herault, Placodii theicholyti (Lichenes), Béziers Hérault, Gallia (A. DE CROZALS).

78. Leptosphaeria galligena Keissler, Beih. d. Bot. Centralbl. Bd. 37., 6606 II Abt., 1920, p. 274.— In pagina superiore thalli lichenis gallas globosas, rugosas, nigras, interdum rhizoidibus sparsis instructas, numerosas, gregarias, pedicellis (+ 2) brevibus suffultis (2-4 mm. diametro) formante; pyenidiis gallis insidentibus, immersis, sat numerosis (usque ad 10) sparsis, subglobosis, nigris, ca. 200-250 × 270-300 metientibus, contextu parenchymatico (cellulis parvis), ca. 75 × 15-20 metientibus; sporidiis ellipsoideis, plerumque subcurvatis, saepe inaequilateralibus, nigro brunneis, 3-septatis (raro 2-vel 4-septatis), septis constrictis, etiam junioribus eguttulatis, oblique 1-vel 2-seriatis, ca. 21-27 × 12.

Hab. in thallo Parmeliae atratae Zahlbr. (Lichenes), in silva Kaholnamano in ins. Sandwicensi, Kanai (J. F. Rock).

79. Leptosphaeria peltigerea (Merrill) Vouaux, Bull. Soc. Mycol. Fr. 6607 1913 p. 119, Trypethelium (Melanotheca) peltigereum Merrill, Lich. exs. n. 85.— Peritheciis in thallo pustuliformi inflato verruciformi et 0,4-1 mm. lato immersis gregariisque, peritheciis demum ostiolo umbilicato prominulis nigris late ovoideis 130-200 μ lat.; contextu obscure brunneo, e cellulis polygoniis minutis 3 μ cr. efformato; ascis cylindraceis v. cylindraceo-clavatis, late breviterque pedicellatis, tunica crassa praeditis, plerumque tetrasporis, 70-90 × 15-18; paraphysibus numerosis, parum septatis, ramosissimis et saepe anastomosantibus, filiformibus, 1,25-1,5 μ crassis apice 2 μ; sporidiis monostichis primum hyalinis simplicibus dein 1-septatis demumque 3-septato-constrictis brunneis, loculis extimis pallidioribus, forma irregularibus plus v. minus incurvatis subfusoideis v. subelaviformibus utrinque rotundatis loculis mediis crassioribus, 23-25 × 6-8,5.

Hab. in thallo Peltigerae sp. (Lichenes), in insula Jamaica, America Centr. (MISS C. E. CUMMINGS).

POCOSPHAERIA Sacc. — Syll. II p. 32, XI p. 325, XIV p. 571, XVI p. 518, XXII p. 235.

1. Pocosphaeria Anonae Rangel, Bol. Agric. Sao Paolo 1915 p. 315, 6608 tab. V fig. 8-12. — Maculis amphigenis, 0,5-3 mm. diam., saepius confluentibus, majoribus sinuosisque superne pallescentibus et margine atropurpureo cinctis, inferne atro-brunneis dein fuscis. Mycelio in parenchymate evoluto, ramoso, noduloso, brunneo, hyphis fertilibus erectis, concoloribus, simplicibus, plerumque flexuosis, septatis, 30-90 × 1,5-4; conidiis ovatis, dein fusiformibus, rectis vel leniter incurvatis, utrinque obtusiusculis, 1-6-septatis, pallide brunneis, 8.22 \times 2.4; peritheciis amphigenis, membranaceis din epidermide velatis, dein erampentibus, papillatis, 70-100 \mu diam., olivaceis; setulis circa ostiolum sitis, rectis vel incurvatis, septatis, 30-60 × 3.5, obscure fuligineis; ascis cylindraceis vel clavatis, plerumque incurvatis, breviter pedicellatis, octosporis, aparaphysatis, 44-60 × 3-5; sporidiis distichis fusiformibus, 3-4 septatis, ad septa constrictis, loculo superiore penultimo crassiore et paullum prominente, pallide olivaceis, 16-20 > 3-4.

Hab. in foliis vivis Anonae reticulatae (Anonaceae), Mimoso, St. Espirito-Santo, Brasiliae.

2. Pocosphaeria pellita Sacc. — Syll. II, 41 (in Leptosphaeria) — var. 6609 cirsiicola Grove, Journ. of Bot. LIV, 1916, p. 186. — Peritheciis gregariis v. seriatis, primo epidermide ostiolo papillato perforata velatis, dein epidermide corticeque excussis denudatis, depressosphaericis, atris, undique ostiolo excepto pilis copiosis rigidis radiantibus septatis olivaceo-nigricantibus obsessis, pilis sursum pallidioribus, 200-300 × 3; ascis clavatis, breviter crasseque pedicellatis, 80-100 × 10-14, paraphysibus filiformibus copiosis, ca. 1 μ cr., pluriguttulatis obvallatis; sporidiis tristichis, fusoideis, flavidis, 8-10-septatis, 45-56 × 3-4, loculis 1-2-guttulatis, loculo tertio vel quarto inflato.

Hab. in caulibus emortuis Cirsii arvensis (Compositae), Glenariff, Hiberniae.

## PHAEOSPORA Hepp. — Syll. XVI p. 519, XVII p. 718.

Phaeospora Fritzei Stein, Lich. Mader. et Mind. p. 8; Vonaux, Bull. 6610
 Soc. Mycol. de Fr. 1913, p. 75. — Peritheciis carbonaceis, gregariis, <sup>1</sup>/<sub>4</sub> mm. latis, emergentibus; ascis late clavatis v. ventricosis, octosporis; periphysibus brevibus, paraphysibus conglutinatis, filiformibus, brevibus, vix distinctis; sporis obscure flavo-brunneis v.

brunneo-nigris, ovoideis, triseptatis,  $12-18 \times 6-8$ .

Hab. in thallo Parmeliae saxatilis (Lichenes), Torinhas (STEIN).

2. Phaeospora hetaerizans (Leight) Arn., Fl. 1874; Vouaux, Bull. Soc. 6611 Mycol. de Fr. 1913 p. 70. — Peritheciis immersis, dimidiatis, parvis, atris, ostiolo parvo praeditis; ascis octosporis; paraphysibus indistinctis; sporidiis angustis, utrinque rotundatis, brunneis, 3-septato-constrictulis, 19-25 × 6-8.

Hab, in thallo Verrucariae submersae (Lichenes), Anglia (BORRER). — Ph. parasiticae proxima sed sporidiis majoribus et peritheciis non conformibus diversa.

3. Phaeospora cacticola F. L. Stevens, Trans. Illin. Ac. of Sc., v. X, 6612 1917, p. 177.— Maculis 5-10 μ long. caules plus minus circumdantibus; peritheciis numerosis confertis 80-150 μ diam., nigris ostiolatis maturis erumpentibus; ascis e oblongis ellipsoideis, 60-75 × 13,25, tenuiter tunicatis, tetrasporis; sporis inordinatis e ellipsoideis oblongis, obtusis, 3-septatis, maturis obscuris, 34-37 × 9.

Hab. in caulibus Rhipsalidis cassythae (Cactaceae), Monte de Oro prope Cayey, Porto Rico, America Centr. — Hyphae mycelicae obscure brunneae, 7-9 μ cr.

- PSEUDOPHYLLACHORA Spegaz., Fungi Costarie. nonn., in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 194.—Stromata biophila amphigena, extus nigricantia, laevia, intus e substantia parenchymatis foliorum vix modificata subsuberosa ochracea repleta; perithecia globulosa, pariete propria membranacea atra praedita, in pulpa stromatis nidulantia sed plane heterogenea, ostiolo epidermidem et crustam stromaticam externam perforante non v. vix protuberante donata; asci octospori, aparaphysati; sporae subcylindraceae 1-septatae, hyalinae. Genus habitu ext. Dothideaceis phyllogenis simillimum sed stromate intus heterogeneo atque peritheciis pariete propria vestitis eximie recedens ac Clypeosphaeriaceis adscribendum.
- 1. Pseudophyllachora Tonduzi Spegaz., l. c. cum icon. Stromata sub-orbicularia amphigena, 2-5 mm. diam. centro atra, ambitu vix crenulata rufescentia, parum e substrato prominula, plana v. lenissime colliculosa; perithecia numerosa discreta pusilla 70-80  $\mu$  cr. in stromatum periphaeria subcircinantia, ostiolo minuto ad hypophyllum erumpentia, extus glabra; asci subfusoidei 35-40  $\approx$  2-3; sporae distichae utrinque obtusissime rotundatae, ad septum medium non

v. vix constrictae, laeves, 8-12 \* 2-3.

Hab. communis et copiosa in foliis vivis Pieramniae bomplandianae (Simarubaceae), in silvis prope San José, Costarica, America trop.

- NEOVENTURIA Sydow, Ann. Mycol. 17., 1919, p. 44. Ita vocandum 6614 est gen. Venturiella Speg. 1909 (Syll. XXII p. 236) nec Venturiella C. Müll. 1875 (Musci). -- Spec. typ. Neoventuria argentinensis (Speg.) Syd., Syll. l. c.
- MASSARIA De Not. Syll. II p. 2, IX p. 759, XI p. 319, XIV p. 561, XVI p. 510, XVII p. 732, XXII p. 236.
- 1. Massaria plumigena E. et E., in Syll. dehest var. tetraspora Dearn. 6615 et House, N. York St. Mus. Bull. n. 188, p. 35 (1916). -- A typo differt sporidiis latioribus et magis variabilibus, 82 \* 21; ascis tetrasporis  $125 \cdot 165 \approx 32 \cdot 40$ ; paraphysibus filiformibus et ascos superantibus.

Hab. in ramis emortuis Viburni dentati (Caprifoliaceae), Albany, Sylvan Beach, Oneida Co. N. Y., Amer. bor. (H. D. House).

2. Massaria Mori J. Miyake, Mycologia, 9., 1917 p. 252 (ex Rep. Se- 6616 ric. Stat., Tokyo, Dec. 1916, p. 310 tab. 17 f. 12-14). — Peritheciis peridermio ostiolis extantibus perforato tectis, sparsis v. 2-3 congregatis, hyphis nigris coalescentibus circumdatis, globosis v. ellipsoideis, 400-600 µ diam.; aseis (ex icone) crasse clavatis, circ. 200 μ longis; sporidiis biseriatis, subfusoideis uno apice acutulis et crassius tunicatis; 3-septatis, ad septum medium tantum constrictis, initio grosse nucleatis, dein guttulatis, flavido-brunneis, demum granulis minutis nigricantibus farctis, 55-70  $\times$  18-23, strato gelatinoso obductis; paraphysibus furcatis, hyalinis, 2,3-3 µ cr. et ascis longioribus.

Hab. in ramis Mori albae (Moraceae), in Japoniae pluribus locis.

3. Massaria phorcioides J. Miyake, Mycologia 9., 1917 p. 251 (ex Rep. 6617 Seric. Stat., Tokyo, Dec. 1916, p. 316, tab. 16 f. 4-5). - Peritheciis sparsis, subcutaneis sphaericis v. ellipsoideis,  $250-300 \times 200-250$ , ostiolo dehiscentibus; contextu parenchymatico nigricante; ascis clavatis v. subellipsoideis, paucis, 110-140 × 35-42, breviter stipitatis, 8-sporis; sporidiis fusiformibus, atro-flavido-brunneis, initio 1-septatis et 3-5-nucleatis, demum 4-, rarius 3-5-septatis, medio

septo constrictis,  $45.52 \times 19.22$ , strato gelatinoso obvolutis; paraphysibus filiformibus, obtusis, intus granulosis.

Hab. in ramis Mori albae (Moraceae), probabiliter parasitica, in Sinae et Japoniae pluribus locis.

4. Massaria moricola J. Miyake, Fungi jap. moric. 1917 t. I p. 9-10-11 6618 (japonice).

Hab. in ramis Mori (Moraceae), in Japonia. — Ex icone: perithecia globoso-depressa, tecta, ostiolo papillato vix erumpenti,  $400\text{-}450~\mu$  lata, excipulo crasso, nigro; asci fusoidei breviter stipitati,  $140 \approx 20$ ; sporidia disticha fusoideo-oblonga, utrinque rotundata, grosse 4-guttata, fuliginea, 3-septata, ad septum medium leviter constricta,  $30 \approx 12\text{-}13$ , strato mucoso obsoleto.

5. Massaria bataanensis Rehm, Ascom. Philippin. VIII, in Leafit. of 6619 Philipp. Bot. VIII, 1916, p. 2951.— Perithecia cortici immaculata innata, dispersa, globosa, hemisphaerice prominentia, minutissime papillulata, atra, glabra 0,5 mm. lata, parenchymatice crasse contexta; ascis clavatis crasse tunicatis apice rotundatis, -120 × 20, 8-sporis; J-; sporis ellipsoideis utrinque rotundatis, medio paullulum constrictis, 4-cellularibus, cellulis mediis rhomboideis, apicalibus triangularibus, dilute flavidulis, dein brunneis, strato mucoso carentes, seniles corrugatae, -25 × 15, 1-2 stichae. Paraphyses copiosae filiformes 1 μ circiter cr.

Hab. ramum Eugeniae bataanensis (Myrtaceae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

6. Massaria Bolivarii Gz. Fragoso, Bol. R. Soc. esp. Hist. nat. XVII, 6620 1917, p. 303, fig. 1.— Peritheciis sparsis, immersis, globosis, 350 μ diam., vix papillatis, subcoriaceis; ascis clavato-oblongis 121 × 24, breviter pedicellatis, crasse tunicatis, apice rotundatis, copiose filiformi-paraphysatis; sporidiis in eodem perithecio biformibus, junioribus fusoideis 1-5-septatis, crasse 2-6-guttatis, muco hyalino obvolutis, 18-21 × 5-6 (sine muco), demum (maturis) oblongis subfusoideis fuscis, utrinque rotundatis, 25-30 × 9-11, crassiuscule tunicatis, 25-30 × 9-11, quinqueseptatis, ad septum medium fortiter constrictis, ad latere vix constrictis, muco non v. vix obductis, loculis plerumque guttulatis.

Hab. in foliis emortuis C h a m a e r o p i s h u m i l i s (Palmae), pr. Malaga, Hispaniae (C. Bolivar).

7. Massaria Platani Ces. (1842) = M. atroinquinans B. et Curt. (1876) - 6621 Syll. Fung. II p. 6 et 8. - Sacc., Notae Myc. (Acc. Pad. 1917), p. 160.

Hab. in ramis corticatis Plata ni (Platanaceae), Rigny (Fla-GEOLET). - Sporidia oblonga, sursum paullo crassiora 3-septata, inferne 1-septata, 55-60 \* 17-20, fuliginea, initio strato mucoso obdueta.

8. Massaria pomacearum v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 6622 1917, p. 252. — Sporidiis magnis, 30-39 × 11-13.

Hab. in Crataego (Rosaceae), Austria.

CLYPEOSPHAERIA Fuck. -- Syll. II p. 90, IX p. 798, XI p. 326, XIV p. 572, XVI p. 518, XVII p. 732, XXII p. 239.

1. Clypeosphaeria Gigantochloae Rehm, Ascomyc. Philipp. V, Leaflets 6623 of Philipp. Botany, VI (1914) p. 2204. - Peritheciis sparsis, culmo semiglobose elato ibique atrato innatis, globosis, glabris, papillula minima prominente praeditis, 0,5 mm. diam., membranaceo-contextis; aseis clavatis, sessilibus, apice rotundatis, 80 × 10; paraphysibus ramosulis 1 a cr.; sporidiis distichis, fusiformibus, rectis, utrinque acutatis, primitus hyalinis, medio septatis, dein 3-septatis, guttatis, non constrictis, fuscidulis, 22-25 \* 5.

Hab. in culmo G i g a n to c h l o a e (Graminaceae), emortuae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

2. Clypeosphaeria nigrificans Syd., Ann. Mycol. 15., 1917, p. 209. — 6624 Perithecia in culmo longe lateque atrato plus minus aequaliter densiusculeque dispersa, immersa, epidermide atrato tecta, lenticularia, 0,75-1,5 mm. diam., 300-500 µ alta, papillula atra mediocri tantum erumpente; asci cylindraceo-clavati, fere sessiles, 80-100 \* 17-21, octospori, paraphysati; sporae distichae, fusoideae, utrinque acutatae, fuligineae, primitus medio 1-septatae, dein 3-septatae, non constrictae,  $33.37 \times 7.8$ .

Hab. in culmis Schizostachy i emortuis (Graminaceae), Mt. Maquiling, Laguna Ins. Philipp. (C. F. BAKER).

3. Clypeosphaeria bakeriana Rehm, Ascom. Philipp. VIII, in Leaflt. 6625 of Philipp. Bot. VIII, 1916, p. 2948. - Perithecia gregaria, cortici immutato innata globulosa, peridermii clypeo atro orbiculari obtecta, hemisphaerice prominentia minutissime papillulata, glabra, carbonacea, -2 mm. lata 1,5 mm. alta; asci cylindracei -170 × 15,8spori; sporae oblongae, utrinque rotundatae, medio septatae non constrictae, utraque cellula guttis 2 oleosis magnis praeditae, hyalinae, demum obscure fuscae, 3-septatae, 30 \* 12, 1-stichae. Paraphyses plurimae, tenerrimae, 1 µ circiter cr.

Hab, ad ramulos Engeniae bataanensis (Myrtaceae), Mt. Maquiling. Ins. Philipp. (C. F. BAKER). - Forma minus evo-

luta, ad corticem Grewiae stylocarpae (Tiliaceae), ibidem (C. E. BAKER). — Praeclara pulchra species, juxta Clypeosph. euphorbicolam P. Henn. ponenda et ad Clyp. massariosporam vergens (Starbeckiella Sacc.).

Clypeosphaeria ambigua v. Höhn., Fragm. z. Mykol. XVII (anno?). — 6626
 P. Strasser, Verh. zool.-bot. Ges. Wien 69., 1919, p. 363. — Descriptio desideratur.

Hab. in ramis siccis Clematidis Vitalbae (Ranun-culaceae), Austria.

MELANOMMA Nits. et Fuck. — Syll. II p. 98, IX p. 801, XI p. 327, XIV p. 573, XVI p. 522, XVII p. 733, XXII p. 241.

1. Melanomma Bubakii Rehm ap. Bubàk, Ann. Naturh. Hofmus. Wien 6627 XXVIII (1914) p. 195.— Peritheciis sparsis, innatis dein emergentibus, globosis, basi applanatis, 200-300  $\mu$  diam , nigris, nitidis, sclerotioideis non collabentibus, excipulo crasso pseudoparenchymatico, cellulis extus fuscis intus hyalinis; ascis cylindraceis, latis, rectis, basi breviter pedicellatis, apice rotundatis, octosporis, 80-120  $\times$  9-13, paraphysibus filiformibus 2  $\mu$  er. obvallatis; sporidis monostichis, fusiformibus, apice superiore plerumque obtusis, 3 septatis, ad septa constrictulis, subfuscis,  $20\text{-}24 \times 7\text{-}9\text{-}2$ 

Hab. in caulibus emortuis Campanulae strictae (Campanulaceae), in monte Nimrud Dagh, Taurus Cataonicus, Kurdistania occid., alt. 2200-2250 m.

2. Melanomma subandinum Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6628 Buenos Aires XXIII p. 58 (1912). — Peritheciis sparsis vel hinc inde gregariis, saepe subseriatis, superficialibus, basi tantum matrice cinerascenti-dealbata insculptis, globulosis, 180-250 μ diam., papillato-ostiolatis, carbonaceis, atris, levibus vel vix rugulosis, ostiolo valide conoideo, rarius compresso sublophiostomaceo, per actatem deciduo, contextu indistincto; ascis cylindraceis, breviter pedicellatis, 125-130 × 15-16, paraphysibus filiformibus sat longioribus copiose cinctis; sporidiis oblique monostichis, fusoideis, utrinque acutis, 3-septato-constrictis, fuligineis, 26-28 × 9-10, loculis aequilongis grosse 1-guttatis.

Hab. in ramis erassioribus languidis Atriplicis pamparum (Chenopodiaceae), in montanis Potrerillos prope Mendoza, Argentina.— Species a M. andino Speg. sporidiis acutis, a M. cacheutense Speg. sporidiis semper 3-septatis recedens, sed facile unius speciei omnes formae.

3. Melanomma Ebeni Gz. Fragoso, Bol. R. Soc. Españ. Hist. nat. t. 6629 18., 1918, p. 78. — Peritheciis numerosis, sparsis vel laxe gregariis, adnatis vel basi subimmersis, globosis vel subglobosis, atris, indistincte parenchymaticis, vel subcarbonaceis, 170-250 μ diam., 160-180 μ alt., ostiolo cylindraceo, crassiusculo, 50-70 μ long., 45-65 μ crass., apice non vel vix incrassato, obtuso-rotundato, poro minuto, pertuso; ascis cylindraceis, vel cylindraceo-clavatis, 90-110 × 14-18, in pedicello brevi subattenuatis, paraphysibus obsoletis; sporidis monostichis, prope apicem subdistichis, olivaceo-fuligineis, oblongis, rectis, 16-22 × 7-9, 3-septato-constrictis eguttulatis.

Hab. in spinis emortuis E b e n i s t e l l a t a e Boiss. (Ebenaceae), prope Kouh-Cherri, Persia (Ferd. Martinez de la Scalera). — An potius Coniothyrio Ebeni Gz. Frag., et Hendersonia Ebeni Gz. Frag., metag. connex. — Melanommati longicolli Sacc. proxima, a Melanommati Bubakii Rehm diversissima.

4. Melanomma Caesalpiniae P. Henn., Hedw. vol. 48. (1908) p. 107.—6630 Peritheciis in caespitulis rotundato-pulvinatis gregariis, superficialibus, atris, globulosis, papillatis, carbonaceis, 160-200 μ diam.; ascis clavatis, apice rotundatis, octosporis, 40-60 × 7-10, paraphysibus filiformibus 1,5-2 μ cr. obvallatis; sporidiis subdistichis, oblongis, obtusis, cinnamomeis, 3-septatis, vix constrictis, 10-15 × 4-5.

Hab. in ramis emortuis Caesalpiniae cearensis (Leguminosae), hort. botan. Goeldi, Parà, Brasilia (BAKER).

5. Melanomma philippinense Sydow, Philipp. Journ. of Sc., Sect. C., 6631 v. 9., n. 2, 1914, p. 167.— Peritheciis sparsis, solitariis, subsuperficialibus, e basi lata conoideis, 0,5-1 mm. diam., atris, carbonaceis, distincte papillatis, glabris, opacis; ascis cylindraceis vel cylindraceo-clavatis, apice obtusis et incrassatis, 140-180 μ longis, 17-22 μ latis, octosporis; paraphysibus copiosissimis, filiformibus, 1 μ crassis; speridiis oblique monostichis usque subdistichis, in superiore asci parte saepe recte monostichis, fusiformibus, utrinque obtuse attenuatis primo 1-septatis, dein 3-septatis, ad septum medium tantum constrictis, dilute fuscis, 30-38 μ longis, 10-11 μ latis.

Hab. ad truncos dejectos, Taytay, in ligno decorticato Fagraeae e fragrantis (Loganiaceae), Lake Manguao (Palawan), Ins. Philipp. (MERRILL).

6. Melanomma purpurascens Peyronel, Mem. R. Acc. delle Scienze di 6632 Torino, Ser. II, tom. LXVI, 1916, p. 20 extr.— Peritheciis sparsis vel laxe gregariis, maculas atropurpureas in ligno inducentibus,

vix basi insculptis, sphaeroideis vel plerumque leniter depressis, ostiolo applanato praeditis, in vetustate aliquantulum collabescentibus et apice incavatis, primum obscure purpureis, dein purpureoatris, opacis vel apice tantum nitentibus, minute rugulosis, 250-350 \( \mu\) diam., excipulo crassiusculo, carbonaceo, contextu intense atro-purpureo, nucleo purpurascenti; ascis cylindraceis vel cylindraceo-clavatis, apice rotundatis et lumine contractis, breve pedicellatis, octosporis, 85-95 × 7-8, immaturis plasmate purpureo farctis. paraphysibus filiformibus, simplicibus, ascos subaequantibus obvallatis; sporidiis monostichis v. raro prope asci apicem subdistichis, forma ludibunda, subcylindraceis, obtuse fusoideis vel varie obovatis, triseptatis, rarissime quadriseptatis vel etiam uniseptatis, ad septa constrictis, interdum loculo secundo septo longitudinali praedito, fusco-melleis, plasmate purpurascenti farctis ideoque diluta rubedine plus minusve tinctis,  $10-14 \times 4-6$  (plq.  $12 \times 5$ ).

Hab. in ramo dejecto, semidecorticato Fraxini excels i o r i s (Oleaceae), Riclaretto (loco dicto Serre, 1100 m. alt.) in Vallis Valdensibus Pedemontii, Italia bor. - A M. rhodomelo et M. sanguinario, maculas rubescentes in substrato etiam inducentibus, differt sporidiis minoribus et pigmento purpureo quo totus fungillus imbutus est.

7. Melanomma mindorense Rehm, Ascomyc. Philipp. III, in Philipp. 6633 Journ. of Sci. VIII (1913) p. 401. - Peritheciis gregariis, sessilibus, modo basi innatis, conoideis, vix papillulatis, glabris, nigris, subcarbonaceis, 500-800 \mu lat.; ascis clavatis, apice rotundatis, octosporis, 150 × 8 circ., paraphysibus filiformibus septatis obvallatis; sporidiis distichis, ellipsoideis, 3-septatis, cellula tertia la. tiore, quaque cellula 1-guttata, ad septa subconstrictis, primitus hyalinis demum fusco-luteis, interdum cellulis apicalibus dilutioribus, 30-33 \* 10.

Hab. in Arenga mindorense (Palmae), emortua, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (E. B. COPELAND).

S. Melanomma medium Sacc. et Speg. — in Sacc., Syll. II p. 104 — var. 6634 Calligoni Rehm, in Ann. Mycol., IX, 1911 p. 369 et in Tranzsch. et Serebrian., Mycoth. Ross. fasc. III-IV, an. 1916, n. 172. - Perithecia in cortice dealbato gregarie sessilia, conoidea, basi epidermide innata, ostiolo papillato obtuso, distincte pertuso, minute verruculosa, atra, perithecio crasso, 0,2-0,5 mm. in diam., haud carbonacea, foveolam relinquentia. Asci clavati vel subcylindracei, 90-100 \* 12, 4-8 spori. Sporae oblongae, utrinque obtusae, primi-

tus medio, dein 3-septatae, cellula secunda latiore, ad septa subconstrictae, flavo-fuscidulae demum fuscae, 15-18 \* 5-7, 1-2 stichae. Paraphyses subramosae 1 µ cr.

Hab. ad caules Calligoni erinacei Borsez. (Polygonaceae), Prov. Turgai, Turkestan (Androssow). -- A typo imprimis differt sporidiis brevioribus.

9. Meianomma citricola Syd. et Butl., Ann. Mycol. IX, 1911, p. 405.— 6635 Peritheciis sparsis v. hinc inde paucis aggregatis, subsuperficialibus, hemisphaericis v. conico-hemisphaericis, superne truncatis, atris, nitidulis, carbonaceis, glabris, levibus, 250-400 µ diam., ore circulari majusculo praeditis; ascis cylindraceis v. cylindraceo-clavatis, rectis v. curvulis, apice obtusis, breviter pedicellatis, 85-95 \* 14-15, octosporis; paraphysibus numerosis, longis filiformibus; sporidiis distichis, oblongis, rectis, utrinque rotundatis, 3-6-septatis, diu hyalinis, tandem dilute brunneis,  $20-22 \times 7$ .

Hab, ad corticem Citri medicae (Rutaceae), Chittagong Indiae or. (R. Sen).

10. Melanomma corticis W. Kirschst., Krypt, Fl. Brandenb. VII p. 241 6636 (1911). - Peritheciis superficialibus, sparse gregariis, sphaeroideis, ostiolo brevi, obscuriore, facile decidno praeditis, in sicco cupulatocollapsis, 200-300 a diam., excipulo atro, tenui-coriaceo, basi hyphis brunneis vix 3 \( \mu\) crassis obsesso; ascis cylindraceo-clavatis, breve pedicellatis, sursum rotundatis, octosporis, 55-65 × 7-8, paraphysibus filiformi ramosis, tenuibus obvallatis; sporidiis distichis, ellipsoideis, rectis, interdum parum inaequilateris, utrinque rotundatis, 2-3-septatis (plerumque 3), ad septa leniter constrictis, luteo-brunneis,  $12-13 \times 4-5$ .

Hab. in interiore parte corticis Populi (Salicaceae), Rathenow in Germania. — Affine M. rhodomelo sed minus, non rubrotingens et sporidiis minus septatis.

TREMATOSPHAERIA Fuck. - Syll. II p. 115, IX p. 811, XI p. 329, XIV p. 575, XVI p. 524, XVII p. 734, XXII p. 245.

1. Trematosphaeria prominens Sacc. et Trott., Ann. Mycol. XI, 1913, 6637 p. 416.—Peritheciis hinc inde dense gregariis, superficialibus, carbonaceis, nigris, globoso-hemisphaericis,  $^{1}/_{3}$ - $^{1}/_{2}$  mm. diam., sursum in ostiolum conicum obtusum sensim productis, hine subconoideis, levibus, glabris; ascis cylindraceis, 140-170 \* 14-16, in stipitem brevem sensim tennatis, filiformi-paraphysatis, octosporis, apice rotundatis; sporidiis primum subdistichis, demum monostichis,

elongato-fusoideis, utrinque obtusulis, subaequilateris, 5 septatis, ad septa demum constrictis, 28-33-36 × 9-11, olivaceo-fuscis.

Hab. in caule Genistae tunetanae (Leguminosae), emortuo, Garian, Tripolitania. — Videtur affinis Tremat. Passerinii (Rab.) Sacc., Syll. IX, p. 812, sed statim dignoscitur peritheciis conicoprominentibus, non obtusis, sporidiis typice monostichis et paullo minoribus.

2. Trematosphaeria Ischnosiphonis P. Henn., Hedw. vol. 48. (1908), p. 6638 107. — Peritheciis innato-erumpentibus, gregariis, subhemisphaericis, atro-subcarbonaceis, minute ostiolatis, 0,5 mm. circ. diam.; ascis clavatis, apice rotundatis, vix stipitatis, octosporis, paraphysatis, 100-120 × 12-15; sporidiis oblique monostichis vel subdistichis, oblongo-fusoideis, utrinque acutis, medio 1 septatis, constrictis, dein 3-septatis, biguttulatis, fuscis, 30-40 × 5-7.

Hab. in vaginis emortuis Ischnosiphonis sp. (Marantaceae), Varzea pr. Rio Guanea, Parà (BAKER).

3. Trematosphaeria Alexii Vouaux ap. Harmand in Bull. Soc. Bot. Fr. 6639 LVI (1909) p. 213.— Peritheciis sparsis, basi immersis, rarius fere superficialibus, irregulariter sphaeroideis, 0,4-1 mm. diam., nigris; ascis cylindraceis, breviter stipitatis, crasse tunicatis, 200-250 × 15-20, octosporis, paraphysibus filiformibus ramosis obvallatis; sporidiis oblique monostichis, cymbiformibus, utrinque leviter constrictis, primum hyalinis et didymis dein 4-locularibus, 40-50 × 10-12, singula cellula media fusca majoreque, singula extrema hyalina multoque minore, loculis magniguttatis.

Hab. in ramis Oleae europaeae (Oleaceae), in montanis Sétubal, Lusitania (CORDEIRO). — A caeteris speciebus oleicolis differt praecipue sporidiorum forma et mensuris.

4. Trematosphaeria maquilingiana Rehm, Ascom. Philippin. VIII, in 6640 Leaflt. of Philipp. Bot. VIII, 1916, p. 2952.— Perithecia dispersa, innato prorumpentia, semper ad basim epidermide arcte cincta, ex lata basi conoidea, ad apicem in papillulam brevem elongata, atra, glabra, 1-1,5 mm. lata et alta, carbonacea. Asci cylindracei -140 × 10, 8-spori; sporae fusiformes, utrinque acutatae, rectae, 3-septatae, cellulis medianis longioribus, semper magniguttatae, non constrictae, fuscae, distichae, 35-40 × 6-7. Paraphyses filiformes.

Hab. emortuum Calamum (? Palmae), in cacumine Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

5. Trematosphaeria persicino-tingens v. Höhn., Fragm. z. Mykol. 843, 660 in Stzgsb. Akad. Wiss. Wien CXXIII, 1, p. 99 (1914).— Perithe-

ciis atris, molli carbonaceis, immersis, globoso-depressis, plerumque transverse elongatis, 260 \mu altis, usque ad 470 \mu longis, ostiolo breviter cylindraceo, 50 µ lato praeditis, in maculis expansis, roseo-persicinis dense gregariis, ligno usque ad 1 mm. rubro-tincto immersis, macula atrata elypeiformi 1-1,5 \* 0,5 mm. tectis, excipulo 30-40 µ crasso, contextu indistincto; ascis copiosis, clavatis, pedicellatis, octosporis, 60 × 20, paraphysibus gelatinosis dense obvallatis; sporidiis 2-3-stichis vel confertis, ellipsoideis, 4-locularibus, ad septa constrictis, griseo-brunneolis, tabacinis vel olivaceo-brunneis, 15-17 × 8-9, loculis internis crassioribus, extimis hemisphaericis.

Hab. in ligno sicco, ins. Palmyra, Polynesia (J. F. Rock) — Sub quaque macula clypeiformi perithecia singula vel bina - Ad Clypeosphaeriam etiam vergit.

6. Trematosphaeria ybbsitzensis Strasser, Ann. Mycol. IX, 1911, p. 6642 82 (Zignoella). — Peritheciis globosis insidenti subsuperficialibus, ostiolo conoideo praeditis extus fumosis et colore rubro-brunneo suffusis, 0,5-0,8 mm. diam.; ascis clavatis in pedicellum elongatum sensim angustatis,  $120-160 \times 18-20$ ; sporis distichis, hyalinis, obtuse fusoideis 4-septatis, in quoque loculo uniguttulatis, ad septa distincte constrictis, 35-40 × 8, demum brunneis; paraphysibus numerosis ramosis.

Hab. in ligno putri mucido, Ybbsitz, Austriae inf. (P. LAMBERT).

OHLERIA Fuck. — Syll. II p. 96, IX p. 800, XVI p. 521.

1. Ohleria aemulans Rehm, Ann. Mycol. X, 1912, p. 392. — Perithe- 6643 ciis gregariis, sessilibus, ad basim subinnatis, nigris, glabris, plus minusve globulosis, breviter papillulatis, carbonaceis, 0,15 mm. diam.; ascis clavatis, apice rotundatis, circ. 120 × 12-14, octosporis; sporis ellipsoideis, subacutatis, triseptatis, primitus cellulis 1magniguttulatis, dein ad septa valde constrictis, fuscis, cellulis mediis demum fere rotundatis, extra ascum in cellulas singulas abeuntibus, 30 \* 6-8, strato gelatinoso tenui obductis, in asci superiore parte 2 inferiore 1-stichis; paraphysibus filiformibus, hyalinis, 2 μ cr.

Hab. in ligno decorticato arboris foliosi, Sonntagberg, Austria inf. (STRASSER). - Oh. brasiliensi Starb. proxima (= 0. insculpta Atk. in Herb. Rehm).

CHAETOSPHAERIA Tul. - Syll. II p. 92, IX p. 799, XI p. 326, XIV

p. 572, XVI p. 521, XVII p. 736, XXII p. 249.

1. Chaetosphaeria meliolicola Sydow, Ann. Mycol. XII, 1914, p. 555.— 6644 Subiculo effuso, copioso, mycelium Meliolae dense amplectente, ex hyphis densissime contextis ramosis copioseque anastomosantibus pallide fuligineis remote septatis 3-3,5 μ crassis composito; peritheciis in mycelio superficialibus, sparsis, globosis, 150-350 μ diam., minutissime papillatis, atris, opacis, tandem non v. parum collabescentibus, parte inferiore hyphis mycelicis obtectis, coriaceis, contextu ex cellulis 14-18 μ diam. composito; ascis clavatis, subsessilibus, 80-100 × 25-35, octosporis, aparaphysatis ut videtur; sporidiis distichis, oblongo-clavatis v. oblongis aut crasse cylindraceis, primitus 1-septatis, dein 2-3- tandem 4-5 septatis, fuligineis, 40-54 × 10-15, cellulis grosse 1-guttatis, aequalibus v. extimis minoribus, omnibus concoloribus, leniter constrictis.

Hab. parasitica in mycelio Meliolae sp. ad folia Aglaiae Llanosianae (Meliaceae), Angat prov. Bulacan, Ins. Philipp. (M. RAMOS).

2. Chaetosphaeria eximia Sacc., Notae Mycol. XX, Nuovo Giorn. bot. 6645 it. XXIII, 1916, p. 202.— Subiculo late effuso olivaceo-nigricante, hyphis e perithecio radiantibus simplicibus, septatis, 400-500 × 3·4, repentibus, parce tortuosis, fulvo-brunneis; peritheciis gregariis, superficialibus, globosis, leviter depressis, 500 μ diam., levibus, atro-nitidis, circa ostiolum leviter pallidis, basi hyphis subiculi cinctis, ostiolo rotundo 90-100 μ diam., papilla secedente aperto; ascis cylindraceis breviter tenuato-stipitatis, apice subrotundatis, filiformi-paraphysatis, 80-90 × 9,5-10, octosporis; sporidiis distichis, fusiformibus, leviter curvis, utrinque acutis, 3 septatis, non constrictis, 25-30 × 5-5,5, fusco-olivaceis, apicibus pallidioribus.

Hab. ad petiolos putrescentes Cocos nucifera e (Palmae), Los Baños, Ins. Philipp. — Imprimis subiculi et ostioli notis mox dignoscitur. Conidia non visa.

3. Chaetosphaeria Puiggarii Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. 6646 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 125. — Plagulis difformibus superficialibus, ambitu diffusis fere indeterminatis atro-fuligineis subcrustaceo-velutinis, hyphis tenuibus tortuosis septatis  $10\text{-}150 \times 5$  compositis, serius denudatis ac perithecia plus minusve conferta ostendentibus; peritheciis globulosis sessilibus parvis, 300-500  $\mu$ , eximie majusculeque umbilicato-ostiolatis glabris, levibus opacis, carbonaceis; ascis subfusoideis-clavulatis, apice rotundatis, deorsum longiuscule cuneato-pedicellatis,  $120 \times 15$  (pedicello

20-22  $\mu$  longo) paraphysatis, octosporis; sporidiis elongato-eliipseideis, transverse 3-septatis, ad septum medium tantum constrictis, utrinque rotundatis, primo pulchre fuligineis pellucidis dein atris opacis,  $20\text{-}22 \approx 7$ .

Hab. ad corticem trunci arboris ignoti in silvis prope Apiahy, Brasilia, America austr. (J. Puiggari).

SPORORMIA De Not. — Syll. II p. 123, IX p. 816, XI p. 329, XIV p. 577, XIV p. 526, XVII p. 737, XXII p. 250.

1. Sporomia montana Peyr., Mem. R. Acc. delle Scienze di Torino, 6647 Ser. II, tom. LXVI, 1916, p. 21 extr.— Peritheciis sparsis vel paucis hine inde gregariis, 250-350  $\mu$  diam., globosis, atris, laevibus, nitidis, ostiolo non vel vix papillato praeditis, basi tantum insculptis; ascis aparaphysatis, longe pedicellatis, parte sporifera late clavata vel ellipsoidea, 40-60  $\times$  18-24, pedicello filiformi 40-60  $\times$  2-3; sporidiis umbrino-fuligineis, fasciculato-confertis vel irregulariter tristichis, cylindraceo-fusoideis, rectis vel curvulis, tetrameris, 25-30  $\times$  6-7, loculis duobus interioribus rotundato-cuboideis vel rhomboidalibus, 6-7  $\mu$  diam., duobus extremis conoideis, 7-10  $\mu$  longis, omnibus facillime secedentibus.

Hab. in ligno marcescenti Pruni Avium (Rosaceae), Riclaretto (loco dicto La Müro, 1400 m. alt.) in Vallibus Valdensibus Pedemontii, Ital. bor. — Obs. Auct.: « Pulchra species, Sporormiae Brassicae Britten affinis; differt matrice aliena, peritheciis superficialibus, ascis sporidiisque crassioribus, loculis facillime secedentibus. A Sp. ulmicola, etiam lignicola, praecipue ob ascos et sporidia minora differt ».

2. Sporormia fasciculata Jensen, Fung. Fl. of Soil, Cornell Univ., Coll. 6648 of Agric., Bull. 315 (1912) p. 473, c. ic. — Peritheciis sparsis vel caespitosis, immersis, demum saepe subliberis, membranaceis, molliusculis, fragilibus, atris, opacis, 250-525 μ diam., ostiolo papillulato exserto praeditis; ascis octosporis, late clavatis, apice rotundatis, deorsum abrupte pedicellatis, 45-60 × 16-30, pedicello 30-40 μ longo, paraphysibus nullis immixtis; sporidiis fasciculatis, cylindraceo-moniliformibus, rectis vel curvulis, 3-septatis, ad septa alte constrictis, 25-30 × 4-7, initio hyalinis, demum atro-fuscis, opacis, loculis facile secedentibus.

Hab. e solo culta, Ithaca N. Y., U. S. A.

XIV p. 579, XVI p. 527.

Melogramma elongatum A. Lor. Smith, Trans. Brit. Mycol. Soc., t. 6649
 VI, P. II, 1918, p. 150. — Peritheciis subglobosis in stromatibus elongatis, angustis, congregatis vel solitariis, immersis vel prominulis, ca. 300 μ lat., ad apicem poro pertusis; paraphysibus filiformibus; ascis elongatis, 8-sporis; sporidiis uniseriatis, oblongoellipsoideis, apiculatis, plerumque rectis, fuligineis, 18-30 × 5-10, 2-3 (inaequaliter)-locularibus, loculis hyalinis minutissimis apicalibus praeditis.

Hab. in ramis putridis, Perthshire, Anglia (C. Mc Intosh).

**PSEUDOVALSA** Ces. et De Not. — Syll. II p. 135, IX p. 820, XI p. 330, XIV p. 577, XVI p. 527, XVII p. 740, XXII p. 396.

1. Pseudovalsa macrosperma (Tul.) Sacc. — Syll. II, 139. — var. fenestrata 6650 Chenantais, Bull. Soc. Mycol. de Fr. XXXV, 1919, p. 124, fig. 18. — Peritheciis 5-600 μ cr., valsoideo-aggregatis aut sparsis, tectis, nigricantibus, globosis, collis convergentibus, ostiolis obtusiusculis; stromate nullo; ascis cylindraceis breve stipitatis 8-sp., 180-200 × 9-10, paraphysatis; sporidiis oblique monostichis, irregulariter ellipsoideis, fuscis, crasse murali divisis, loculis inaequalibus fere hyalinis, initio guttulatis dein punctatis, utrinque truncatis, appendiculis hyalinis rotundatis auctis. Sine appendiculis 30-32 × 16-18, cumque 37-45 μ.

Hab. in ramis corticatis Carpini (Betulaceae), Rigny-sur-Arroux, Gallia (FLAGEOLET).

- PHILONECTRIA Hara, Bot. Mag. Tokyo v. 28., 1914, n. 332.— Stroma nullum. Perithecia caespitosa, globosa v. ellipsoidea papillato-ostiolata, carbonacea v. membranacea, nigra. Asci cylindraceo-clavati, octospori paraphysati. Sporae ellipsoideae v. fusoideae, 3-septatae coloratae. Parasiticum in fungis.— An genus satis diversum a Melanommate v. Gibberidea?
- 1. Philonectria variabilis Hara, l. c., cum icon. Solitaria v. caespitosa; peritheciis sphaeroideis v. subglobosis, ostiolo papillato praeditis, laevibus subcarbonaceis v. membranaceis, nigris, 250-300 μ altis 220-260 μ latis; ascis cylindraceis, clavatis v. lanceolatis, stipitatis, octosporis, 80-96 × 6-9; paraphysibus filiformibus, hyalinis, 1-1,5 μ cr.; sporidiis distichis v. oblique monostichis, ellipsoideis v. fusoideis, 3-septatis, ad septa non v. leniter constrictis, flavidobrunneis, 10-13 × 4-5.

Hab. in sporodochiis, stromatibus et peritheciis Nectriae variabilis, Kawauye-mura prov. Mino, Japonia.

GIBBERIDEA Fuck. — Syll. II p. 132, IX p. 820, XVI p. 1136, XVII p. 739, XXII p. 251.

1. Gibberidea arthrophyma Ch. E. Fairman, Mycologia 10., 1918, p. 6652 246.— Peritheciis dense caespitosis e cortice minute lacerata erumpentibus, globosis extus. rugosis centro ostiolato-umbilicatis, pallide nigris, 250-300 μ diam.; ascis clavato-cylindraceis apice rotundatis, breviter stipitatis, 8-sporis, 100 × 10-12; sporidiis irregulariter distichis, raro monostichis, oblongo-fusoideis 4-septatis, loculis tribus superioribus latioribus, loculo medio distincte crassiori, rectis v. curvis atrinque obtusis, primum hyalinis, demum flavis v. pallide brunneis, 20-23 × 7.

Hab. in caulibus vetustis Chrysothamni graveolentis (Compositae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

2. Gibberidea praeandina Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6653 Buenos Aires XXIII, p. 59 (1912). — Caespitulis minutis, cucurbitarioideis, nigris, per corticis rimas erumpentibus; peritheciis in quoque caespitulo 3-8 dense congestis, globosis, 150-200 μ diam., ostiolo umbilicato perforatis, atris, coriaceis, glaberrimis, contextu indistincto; ascis cylindraceis, breviter pedicellatis, apice crassiuscule tunicatis, 110-120 × 12-14, pseudoparaphysibus densissimis coalescentibus cinctis, octosporis; sporidiis elliptico-fusoideis, rectis vel lenissime inaequilateris 3-septatis, ad septam medium tantum validiuscule constrictis, 24-26 × 6-8, eguttulatis, pallide fuligineis.

Hab. in ramis emortuis Eupatorii saucechicoensis (Compositae), in dumetis Potrerillos, prope Mendoza, Argentina.

3. Gibberidea? andina Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue-6654 nos Aires XXIII p. 59 (1912). — Caespitulis ligno denudato insidentibus, moriformi-hemisphaericis, 1-2 mm. diam., nigris, primo subiculo hyalino (an heterogeneo?) ex hyphis tenuissimis, 1,5 μ cr., dense ramulosis, conidiis parcis fusiformibus, arcuatis, 60-100 × 8-10, 5-7-septatis, concoloribus praeditis efformato; peritheciis dense constipatis, superne liberis, globoso-conoideis, acute papillatis, 150-250 μ diam., atris, carb contextu indistincto; ascis cylindraceis, abrupte breviss cellatis, 75-85 × 10-15, paraphysibus mucosis vix longioi iuscule obvallatis; sporidiis ellip-

tico fusoideis, 3-septatis, ad septa, praecipue medium, constrictis,  $17-20 \times 7-8$ , e hyalino pallide fuligineis, loculis omnibus grosse 1-guttatis.

Hab. in ramis dejectis subputrescentibus Tricyclae spinosae (Nyctaginaceae), in dumetis Potrerillos prope Mendoza, Argentina.

- cide parasitica. Stroma superficiale ex hyphis tenuibus compositum. Perithecia superficialia vel basi tantum in stromate immersa, dense gregaria, globoso-conoidea v. irregularia, atra, carbonacea, v. coriaceo-carbonacea, minute papillata. Asci cylindracei v. subclavati, octospori, paraphysati. Sporidia oblonga pluriseptata, colorata. Genus quoad sedem in systemate dubium, probabiliter Gibberideae affine.
- 1. Coccidophthora variabilis Sydow, l. c. p. 263, fig. V.— Stromatibus 6656 superficiem Coccidium fere omnino obtegentibus, atris, forma irregulari, ex hyphis hyalinis usque olivaceo-brunneis tenuibus sursum versus obscurioribus compositis; peritheciis in stromate superficialibus v. basi tantum leniter immersis, quoad formam et magnitudinem variabilibus subglobosis conoideis, elongatis v. irregularibus, 150-300  $\mu$  altis 120-200  $\mu$  latis, atris, glabris, subcarbonaceis, minutissime papillatis, contextu parietis indistincto; ascis cylindraceo-clavatis, apice obtusis, brevissime stipitatis v. sessilibus, 80-100  $\times$  6-9, octosporis; paraphysibus filiformibus, hyalinis, ca. 1,5  $\mu$  latis; sporidiis monostichis usque distichis oblongis, utrinque obtusis, primo 1-septatis, mox triseptatis, non constrictis, brunneis, 8-11  $\times$  3-4,5.

Hab. parasitica in Coccide quodam ad folia Sasae paniculatae (Graminaceae), Kawauye-mura prov. Mino, Japonia (K. HARA).

- STARBAECK). Differt a Titanella praecipue ascis octosporis et sporis multo minoribus transverse tantum septatis. Huc spectant (sec. Sydow): Clypeosphaeria? massariospora Starb., Ch. bakeriana Rehm, Rosellinia Mangiferae Syd., Anthostomella Elmeri Sydow, Trematosphaeria Palaquii Rick.
- LASIOSPHAERIS F. E. Clements, Genera of Fungi 1909 p. 35, 173.— 6658 Est Lasiosphaeria phaeophragmia.— Huc pertinet L. hispida Tode.

HERPOTHRIX F. E. Clements, Genera of Fungi 1909 p. 35 et p. 173.— 8659 Est Herpothrichia phaeophragmia.— Typus H. calospora Winter.

## Sect. 8. Hyalodictyae

PLEOSPHAERULINA Pass.— Syll. XI p. 350, XIV p. 611, XVI p. 554, XVII p. 743, XXII p. 253.

1. Picosphaerulina Phaseoli Syd., Enum. Philipp. Fungi I, in Philipp. 6660 Joarn. of Sci. VIII (1913) p. 271.— Maculis amphigenis, irregularibus, 0,3·2 cm. longis, arescentibus; peritheciis epiphyllis sparsis, immersis, dein erumpentibus. lenticulari-globosis, S5·130 μ diam., poro 25·35 μ lato pertusis, membranaceis, atris, contextu pallide fuligineo; ascis saccatis, sessilibus, apice rotundatis, S5·110 × 20·35, aparaphysatis, octosporis; sporidiis distichis, oblongis, utrinque obtusis, transverse 3-vel saepius 4-septatis, non vel vix constrictis, cellulis 2 vel 3 mediis septo uno longitudinali vel obliquo percursis, hyalinis, 24-28 × 8-10.

Hab. in foliis vivis Phaseoli semierecti (Leguminosae), Luzon, Manila, ins. Philipp. (P. W. GRAFF).

2. Pieosphaerulina peltigericola (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 6661 1913 p. 38, Verrucaria peltigericola Nyl., Flora 1874, p. 14.— Peritheciis prominentibus, vix 0,1 mm. diam., contextu nigro v. brunneo-nigro; ascis bisporis; sporidiis ellipsoideis, hyalis, leviter muralibus, 40-56 \* 14-22.

Hab. in thallo Peltigerae caninae (Lichenes), Finlandia (NORRLIN).

3. Płeosphaerulina canadensis Bubàk et Dearness, Hedw. 58., p. 16 6662 (1916). — Maculis utrinque visibilibus, orbicularibus, 3-6 mm. in diam., albidis, aridis, lateritio-marginatis; peritheciis epiphyllis, creberrimis, gregariis, globosis, 100-200 μ in diam., brunneolis, contextu tenuissimo, grosse celluloso, pseudoparenchymatico, flavido, epidermide tectis, poro obscuriore apertis; ascis ovoideo-clavatis vel oblongis, 70-120 × 35-40, rarius usque 60 μ latis, apice valde incrassatis, rotundatis, basi brevissime pedicellatis, 2-4-6-8-sporis, aparaphysatis; sporidiis tristichis vel acervatis, ellipsoideis vel ellipsoideo-oblongis, 30-43 × 11-15, plerumque 3-, non raro 4-5 septatis, saepe loculo 1-2, rarius 3 longitudinaliter uniseptatis, non constrictis, utrinque rotundato-attenuatis, tenui-tunicatis, hyalinis, muco crassiusculo, hyalino obvolutis.

Hab. ad folia viva Smilacis herbaceae (Liliaceae), Lon-

don Ont., Canada (J. Dearness). — A Pl. smilacina Speg. peritheciis creberrimis pallidis, sporidiis plerumque triseptatis, ascis longioribus etc. diversa.

4. Pleosphaerulina suchumica (Siem.) Siemaszko, in litt., Sphaerulina 6663 suchumica Siemaszko, Materialy po mikologii i fitopatologii Rossii, v. III, Petersburg 1915, Extr. p. 6, fig. 2. - Peritheciis paucis circ. 150-200 µ diam. poro lato pallidiore pertusis, brunneis, contextu celluloso, cellulis 6-10 µ diam.; ascis aparaphysatis ovalibus, octosporis, 50-60 > 30-45; sporidis 3-5-septatis raro longitudinaliter uniseptatis, hyalinis, 24-30 × 10-12.

Hab. in foliis languidis Hibisci esculenti et Gossy. pii herbacei (Malvaceae), Suchum-Kale, Abchazia, Rossia merid.

5. Pleosphaerulina ulmicola Naoumoff, Bull. Soc. Mycol. Fr. 1914, p. 6664 383, t. XX, f. 2-3.— Peritheciis semi-immersis, epidermide velatis dein liberis, subsphaericis nigris, 190-220 µ diam., 140 µ alt. poro pertusis; contextu parenchymatico firmulo, 20 µ crasso ex cellulis fu. ligineis rotundato-poligonatis, 8-11 µ diam. constituto; ascis fasciculatis, clavatis, numquam saccatis, apice incrassatis (usque ad 5,5  $\mu$ ), hyalinis, 50-63  $\mu$  longis, 22-25  $\mu$  crassis aparaphysatis; sporidiis 2-3-stichis oblongo-ovoideis, subclavatis, 5-transverse septatis et longitudinaliter 1-interrupto septatis, medio subconstrictis, 22 » 8,25, pallide olivaceis.

Hab. in ramulis alatis Ulmi campestris L. var. scabrae suberosae (Ulmaceae), prov. Austro-Ussuriensi, Rossiae orient. - A Pl. corticola (Fuck.) Rehm (= Sphaeria sepincola Fr., Metasphaeria sepincola Sacc., Leptosph. sepincola W., Sphaerulina sepincola W., Sph. intermixta Sacc., Plaeosphaerulina intermixta Berl. etc.) ob peritheciis, ascis majoribus, sporidiis majoribus et coloratis facile distinguitur.

6. Pleosphaerulina Violae P. Nagornyi, Pilzschädl. die im Jahr. 1911 6665 u. 1912 in Gouv. Stavropol gesamm. wurden, in Journ. « Bolestni Basteni », VII, 1913, p. 101, fig. 1-4. — Maculis rotundatis, oblongatis v. angulatis, amphigenis, melius expressis in pagina superiore foliorum, non raro confluentibus, albo-isabellinis, albo-griseis, v. rare albis, zonatis, margine luteo v. umbrino elevato cinctis; peritheciis epiphyllis, sparsis v. subgregariis, satis amplis, epidermide primo tectis, dein erumpenti-superficialibus ostiolo parvo plerumque rotundo instructis, nigris, globulosis v. conoideo sphaeroideis; quattuor ascis piriformibus aparaphysatis nonnumquam basi

in stipitem brevem productis, octosporis; sporis ovoideo-oblougatis v. ellipsoideis, saepius leniter constrictis, horizontaliter 4-6 septatis, septo verticali uno, initio pallide olivaceis, dein hyalinis, 25- $32 \times 13-15$ .

Hab. in foliis vivis Violae odoratae et hirtae (Violaceae), prov. Stavropolitana, Cancasus borealis.

\*) VIZELLA (Sacc.) Theiss., char. emend. in Broteria, Bot. v. XII, 1914, fasc. I p. 20. — Perithecia gregaria, carbonacea, applanata, simplicia, ostiolo non typico, sub cuticula oriunda epidermide adnata, mycelio tenui dendritico. Conidia in perithecio ad marginem basalem evanescentia, continua, brunnea, tertio superiore fasciâ hyalinâ cincta, polo infero papillâ hemisphaericâ praedita v. non. Asci clavati paraphysati. Sporidia hyalodictya. — Gen. affine Cuthariniae Sacc., a qua differt insertione subcutanea. - Typ. gen.:

1. Vizella conferta (Cooke) Sacc.), Syll. II p. 662.

6666

2. Vizella appendiculosa (Mont. et Berk.) Theiss. 1. c. (= Asterina ap- 6667 pendiculosa Mont., Syll. I p. 47). — Species excludendae: Viz. Hieronymi Wint. (ad Lichenes pertinet), V. guaranitica Speg. (= Amphisphaerella), V. urvilleana Speg. (= ? Amphisphaerella), V. Guilielmi Rehm, nom. nud. (ad Lichenes pertinet).

3. Vizella Passiflorae Rehm, Leafl. of Philipp. Bot. v. VI art. 96, 1913, 6668 p. 1945. - Secundum Theissen (Broteria l. c. p. 30) ob sporidia non observata potius status conidicus Asterinae cujusdam.

CATHARINIA Sace. — Syll. II p. 275, IX p. 892, XI p. 350, XIV p. 611, XVI p. 554, XVII p. 743, XXII p. 255.

1. Catharinia Möhringiae Rehm, Ann. Mycol. XI, 1913, p. 151 .- Pe. 6669 ritheciis 5-6 dispersis, innatis, dein prorumpentibus, globosis, breviter obtuse papillulatis, nigris, glabris, 0,2 mm. lat., excipulo fusco-umbrino crasse tunicato; ascis cylindraceo-clavatis, apice rotundatis, -180  $\approx$  20-24, octosporis; sporis ovoideis v. subclavatis, transverse 7-septatis, medio subconstrictis, superiore dimidia parte latiore magisque obtusa quam inferiore, praeter cellulas apicales ceterae semel longitudinaliter divisae, hyalinis, 25-30 × 10-12, oblique monostichis. Paraphysibus nonnullis filiformibus.

Hab. ad foliola Möhringiae polygonoidis (Caryophyllaceae), Reiteralpe prope Reichenhall alpium Bavariae (ADE).

<sup>\*)</sup> Cnfr. Theissen, in Broteria, Bot. v. XII, 1914, fasc. I, p. 13 et 30.

- DASYSPHAERIA Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII p. 60 (1912).—Perithecia superficialia, hispidula, ostiolata, atra. Asci paraphysati, octospori. Sporidia muriformia hyalina. Est *Pleosphaeria* hyalospora.
- 1. Dasysphaeria andicola Speg., loc. cit., cum. ic. Peritheciis ligno 6670 denudato cinerascente insidentibus, hinc inde dense gregariis, omnino superficialibus, udis lenticularibus, 150-180 μ diam. siccis cupulato-collapsis obsolete papillato-ostiolatis, coriaceo-subcarnosulis, contextu indistincto, opaco, atro, pilis flexuosulis, simplicibus, 25-100 × 4-6, continuis vel 2-cellularibus, fumoso-chlorinis adspersis; ascis subellipsoideis, apice late rotundato-truncatis, basi brevissime crasseque pedicellatis, 80-90 × 20, paraphysibus densissimis subcoalescentibus, superne rufescentibus cinetis; sporidiis distichis, ellipsoideo-ovoideis, utrinque rotundatis, transverse 3-5-septatis, ad septum medium constrictis, loculo uno alterove longitudinaliter diviso, hyalinis, 20-26 × 10-12.

Hab. ad ramos dejectos putrescentes Duvauae dependentis, in saxosis, Potrerillos prope Mendoza, Argentina.

**TEICHOSPORELLA** Sacc.— Syll. II p. 303, IX p. 908, XI p. 351, XVII p. 744, XXII p. 258.

1. Teichosporella acolioides Rehm, Ann. Mycol. X, 1912, p. 392.— Pe-6671 ritheciis gregariis, in cortice dealbata sessilibus, globosis, vix papillulatis, plerumque astomis, nigris, glabris, 0,2-0,5 mm. diam.; cylindraceis, apice rotundatis, circ.  $120 \times 12\text{-}15$ , octosporis, J-; sporis ellipsoideis, obtusis, hyalinis, 1- dein 3-, demum 5-septatis, cellulis mediis, rarius ceteris, longitudinaliter 1-septatis,  $20\text{-}22 \times 9$ ; paraphysibus subramosis, hyalinis, 1,5  $\mu$  cr.; excipulo crasso, parenchymatico, fusco.

Hab. ad corticem Populi piramidalis (Salicaceae), Burgkundstadt, Franconia sup. (ADE).

2. Teichosporella sanguinea Sydow, Ann. Mycol. IX, 1911, p. 145.— Peritheciis gregariis, rarius dispersis, per corticem sanguinee decoloratum erumpentibus et tandem subsuperficialibus, subturbinatis, 1-1,75 mm. diam., coriaceo-carbonaceis, duris, tota superficie rugo. sis et sauguineo-pruinosis, centro minute papillatis, demum collabescentibus, pariete crasso (300-400 μ); ascis clavatis, apice rotundatis et leniter incrassatis, basi in pedicellum attenuatis, 240-320 × 50-70, plerumque 4-sporis; sporidiis irregulariter distichis, fusiformibus primo medio 1-septatis et utrinque attenuatis, dein tran-

sversaliter pluries septatis et tandem in maturitate dense muriformibus apicibus obtusis et horizontaliter 25-40-septatis, verticaliter 4-8-septatis, rectis v. inaequilateris, hyalinis v. hyalino-flavidis, ad septa haud constrictis,  $100-170 \approx 20-28$ ; paraphysibus numerosissimis, filiformibus, ascos superantibus ramosis.

Hab. in corticibus, Sende, Station Edea, Kamerun (Buesgen).

## BOERLAGELLA Penz. et Sacc. — Syll. XIV p. 612, XXII p. 256.

1. Boerlagella effusa Syd. et Butl., Ann. Mycol. IX, 1911, p. 403.— 6673 Subiculo late effuso, velutino, nigro, ex hyphis septatis, filiformibus simplicibus erectis obscure brunneis opacis usque 500 μ alt. et 6-7 μ cr. composito; peritheciis in subiculo absconditis, superficialibus, applanato-globosis, subhemisphaericis, atris, 0,4-0,5 mm. diam., tenuiter carbonaceis, ostiolo obsoleto, setis filiformibus rectis obsitis, contextu e cellulis 11-14 μ diam. composito; ascis crasse tereti-clavatis v. cylindraceis, numerosis, crasse tunicatis, sessilibus, apice obtusis, 170-120 × 32-45; paraphysibus filiformibus; sporidiis distichis, 2-8 in asco, oblongis, dense muriformibus, transverse 7-9-septatis, longitudinaliter 1-2-septatis, haud constrictis, utrinque obtusis, hyalinis v. dilute chlorinis, 60-68 × 18-22.

Hab. in ligno v. ramis decorticatis Populi ciliatae (Salicaceae), Mussoorie, Indiae or. (INAYAT).

**TEPHROSTICTA** Sace. et Syd. — Syll. XVII p. 745. — Est *Teichosporella* subiculo insidentia, peritheciis collabescentibus.

1. Tephrosticta ficina Syd., Enum. Philipp. Fungi I, in Philipp. Journ. 6674 of Sei. VIII (1913) p. 271. — Subiculo tenuissimo, epiphyllo, late effuso, totam folii superficiem plerumque occupante, haud maculiformi, nigro cinereo, ex hyphis longiusculis, e subhyalino fuscidulis, crebre septatis, 4-7 μ cr., ad septa dein plus minus constrictis et moniliformibus, tandem in articula secedentibus composito; peritheciis in subiculo aequaliter dispersis, superficialibus, globosohemisphaericis, mox collapsis, nigris, glabris, levibus, 140-190 μ diam., apice poro rotundo minutissimo epapillato pertusis, e cellulis 8-10 μ diam. contextis; ascis fasciculatis, clavatis, sessilibus, apice rotundatis et crasse tunicatis, 50-65 × 17-22, aparaphysatis, octosporis; sporidiis distichis, ellipsoideo-oblongis, utrinque late rotundatis, transverse 5-7-septatis, loculis paucis vel omnibus longitudinaliter vel oblique 1-vel 2-septatis, byalinis, 28-35 × 10-13.

Hab. in foliis vivis Fici ulmifoliae (Moraceae), Lu-

zon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

- GRIPHOSPHAERIA v. Höhnel, Ann. Mycolog. 16., 1918, p. 87.— Perithecia immersa ostiolo tantum prominula, rotundata, membranacea, infra et circa ostiolum parenchymatica caeterum hyphis tenuibus parallelis efformata. Pasaphyses elongatae filiformes tenues guttulatae. Asci cylindracei tenuiter tunicati breviter pedicellati, apice rotundato-incrassati. Sporidia hyalophragmia, v. pro parte dictyospora. Typus generis:
- Griphosphaeria corticola (Fuck.) v. Höbn., l. c., Sphaeria corticola 6675
   Fuck., Sph. cinerea Fuck., Sph. lejostegia Ellis, Sphaerulina salicina
   Sydow.
- CURREYELLA Sacc., Syll. XI, 1895, p. 379 (ut Sectio). Discostroma 6676
  F. E. Clements, Genera of Fungi 1909, p. 50, 173. Est Curreya hyalodictya. Typ. gen. C. Rehmii Schn. Cnfr. Syll. XXIV, 1., p. 538; Ann. Mycol. 13., 1915, p. 181.

## Sect. 9. Phaeodictyae

**PLEOSPORA** Rabenh. — Syll. II 241, IX p. 873, XI p. 342, XIV p. 594, XVI p. 544, XVII p. 747, XXII p. 258.

1. Pleospora laminariana Sutherl., Trans. Br. Mycol. Soc. V (1916) p. 6677 260, t. V f. 8-10. — Peritheciis initio omnino immersis, postremo erumpentibus et partim liberis, globosis, ostiolo brevissimo, contextu denso, atris, carbonaceis, 250-350 μ diam.; ascis cylindraceis crasse tunicatis, octosporis, 100-110 ≈ 25; sporidiis ellipsoideis vel ovoideis, flavis vel fulvis, muriformibus, plerumque transverse 7-septatis, septis longitudinalibus compluribus; paraphysibus filiformibus, maturitate deliquescentibus.

Hab. in thallo Laminariae (Algae), Dorset et Orkney, Britannia.

2. Pleospora Pelvetiae Sutherland, New Phytologist XIV, nn. 2-3 p. 6678 41 (1915), fig. IV, 3-4! (nec 1-2). — Mycelio crasso, brunneo, e cellulis irregularibus efformato; peritheciis primum immersis, demum superficialibus, latis, nigris, coriaceis, breviter conoideo-ostiolatis, 150-200 μ cr.; ascis cylindraceis v. leniter angustatis, tenuiter tunicatis, 110-125 × 25-30, octosporis; sporis distichis, ellipsoideo-oblongis, flavescenti brunneis, plerumque 6-7 transverse septatis et septis verticalibus numerosis praeditis, constrictulis, 30-35 × 12.

Hab. saprophytice in Pelvetia (Algae), ad litora Brittaniae. — Socium adest antea status conidicus parasiticum Macrosporium Pelvetiae.

3. Pleospora vulgaris Niessl. — Syll. II, p. 243 — var. putaminum Sacc. 6679
Notae Mycol. XXIV p. 28 (Bull. Orto bot. Napoli 1918). — Peritheciis erumpentibus, dein subsuperficialibus, obtuse globulosis,
180-200 μ diam., contextu parenchymatico, fuligineo; ascis 64-66
× 8-9; sporidiis oblique monostichis, oblongis, utrinque obtusulis,
16 × 7,5, aureo-fulvis, 5-septatis parceque muriformibus.

Hab. in putamine putrescenti C o r y l i A y e l l a n a e (Betulaceae), Avellino, Ital. merid.— A typo recedit ascis sporidisque minoribus, peritheciis subsuperficialibus.

4. Pleospora briosiana Maffei in Rendic. Acc. Lincei, ser. 5. XXV 6680 (1916) p. 339 et in Atti Ist. Bot. Pavia XVI (1916) p. 232, tab. XVII fig. 7-10.— Maculis amphigenis, umbrinis vel avellaneo-brunneis, castaneo cinctis, irregularibus, marginalibus vel latis; peritheciis punctiformibus, gregariis, innato-erumpentibus, prominulis, poro pertusis, 180-250 × 80-190; ascis clavatis, 98-106 × 23-24, octosporis; sporidiis distichis, 5-7-septato-muriformibus, loculis tertio et quarto plerumque inflatis, 28-30 × 11-12, ellipsoideis, apice leviter acuminatis, melleis, paraphysibus filiformibus septatis.

Hab. in foliis vivis Bignoniae buccinatoriae (Bignoniaceae), Chiavari, Liguria, Ital. bor.

5. Pleospora hepaticola W. Watson, Trans. Brit. Myc. Soc. IV, pt. II, 6681 1913, p. 295 (1914). — Peritheciis sphaeroideis, 0,5 mm. vix latis, breviter papillatis, nigris, subnitidis; ascis clavatis, octosporis, manifeste stipitatis; sporidiis distichis, ellipsoideis, medio non constrictis, uno apice acutis, 5-7-septato-muralibus, primo hyalinis dein fuligineis, 20-28 × 8-9; mucilaginibus jodo rubescentibus.

Hab. in foliis Lophocoleae heterophyllae (Bryophytae), Dittisham, Devon, Britannia.

6. Pleospora curvasca Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6682 (1914) p. 200.— Peritheciis sparsis, subepidermicis dein nudis, globosis vel parum applanatis, breve papillatis, 300-350 μ diam., nigris, opacis, excipulo crasso, minute pseudoparenchymatico, fusco; ascis clavatis, plerumque semiannulatis, apice rotundatis, basi breviter stipitatis, 80-120 × 20-25, paraphysibus filiformibus obvallatis; sporidiis oblongo-fusoideis, rectis vel curvulis, 25-30 × 9-13, supra distichis infra monostichis, semper 3-septatis, longitudinaliter non divisis vel cellulis 1-2 mediis septo unico instructis, utrinque at-

tenuato-rotundatis, ad septa plus minusve constrictis, brunneis.

Hab. in caulibus emortuis Campanulae strictae (Campanulaceae), in monte Nimrud Dagh. distr. Mamuret-ül-Asis, in Tauro cataonico, Kurdistania occid., alt. 2000 m. circ.

7. Pleospora Lantanae Jaap, Ann. Mycol. XV, 1917, p. 106. — Peri- 6683 theciis gregariis, ramulos totos occupantibus, subcutaneis et basi ligno leniter infossis, pustulatim prominulis, denique erumpentibus, depresse globosis, 0,4-0,6 mm. lat., nigris, subcoriaceis, nitidulis, ostiolis longiusculis; ascis longe clavatis, 225 × 20, apice late rotundatis, octosporis; sporidiis monostichis, oblongo-fusoideis, utrinque obtusis, 7-raro 9-septatis, septis 1-2 longit. partitis, ad septum quartum subconstrictis, 25-30 × 8-10, flavis; paraphysibus copiosis, filiformibus, 1-1,5 μ cr., hyalinis, facile diffluentibus.

Hab. in ramis emortuis Viburni Lantanae (Caprifoliaceae), M. S. Salvatore pr. Lugano, Helvetia italica. — Ad Teichosporam forte nutat.

8. Pleospora kouh-cherrica Gz. Fragoso, Bol. R. Soc. Españ. Hist. nat. 6684 t. 18., 1918, p. 80. — Peritheciis numerosis, gregariis, erumpentibus, atris, globoso-depressis vel oblongis, usque 250 μ diam., contextu atrofuligineo, pseudoparenchymatico; ascis oblongis breviter pedicellatis. 90·120 × 24·38, paraphysibus numerosis, filiformibus ramosis obvallatis; sporidiis irregulariter distichis vel conglobatis, fuligineis, oblongo-ovoideis, 30·40 × 17·21, 3·7·septatis, loculis mediis longitudinaliter 1·2·septatis, ad septum medium constrictis, caeteris subconstrictis.

Hab. in caulibus emortuis Dianthi fimbriati M. B., subsp. la evissimi Pau (Caryophyllaceae), prope Kouh-Cherri, Persia (FERD. MARTINEZ DE LA ESCALERA). — A Pleospora dessilienti P. Magnus, in caulibus Dianthi fimbriati in Persiae occid., et Pleospora sororia Bubàk, in caulibus Dianthi orientalis (Kurdistaniae occid.) diversissima.

9. Pleospora sororia Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6685 (1914) p. 202. — Peritheciis sparsis, initio epidermide nigricante tectis, hyphis paucis fuscis basi praeditis, dein epidermide fissa nudis, applanatis, 250·300 μ diam., papilla minuta ornatis, nigris, contextu tenui, pseudoparenchymatico, atrofusco; ascis ellipsoideovel oblongo-clavatis, tunica tenui, basi breviter pedicellatis, 70·100 × 25-40, paraphysibus filiformibus obvolutis; sporidiis aggregatis, ovoideis, fuscis, apice rotundatis, 30·38 × 17·19, transverse 3-septatis, non constrictis, loculis duobus mediis longitudinaliter divisis,

loculo infimo protracto acutiusculo.

Hab. in caulibus emortuis Dianthi orientalis (Caryophyllaceae), in monte Nimrud-Dagh, Tauro cataonico in Kurdistania occidentali, alt. 2000-2200 m. — A speciebus affinibus facile distinguenda ob ascos latiores et sporidia majora, basi acutata.

10. Pleospora Clematidis Fuck. — Syll. II p. 255 — f. Silenes Gonz. 6686 Fragoso, Bol. R. Soc. Españ. Hist. nat., t. 18., 1918, p. 79. - Peritheciis sparsis epidermide tectis, ostiolo papillulato praeditis; ascis usque 120 \* 12-21; sporidiis monostichis v. subdistichis, hyalinis 1-3-septatis, flavido-melleis 5-septatis, longit. 1-septatis, oblongis rectis v. curvulis, ad septa constrictis, loculo tertio leniter inflato, 18-24 \* 8-14.

Hab. in foliis siccis Silenes Boryii Boiss. var. Sefidianae Pau (Caryophyllaceae), prope Kouh-Sefid, Persia (FERD. MARTINEZ DE LA ESCALERA). — Socia Cytospora Silenes Gonz. Frag.

11. Pleospora Escalerae Gz. Fragoso, Bol. R. Soc. Españ. Hist. nat., 6687 t. 18., 1918, p. 80. — Peritheciis gregariis, globosis vel globosodepressis, epidermide evanescente, superficialibus, atro-brunneis nitentibus, usque 300 \( \mu\) diam., vix papillatis, contextu indistincto; ascis late clavatis, usque 100 × 36, plerumque curvulis, brevi stipitatis, parietibus crassiusculis, paraphysatis; sporidiis distichis obscure brunneis, oblongis, usque 36 × 18, 3-septato-constrictis, loculis mediis septo longitudinali divisis.

Hab. in caulibus emortuis Silenes peduncularis Boiss. (Caryophyllaceae), prope Kouh-Sefid, Persia (FERD. MARTI-NEZ DE LA ESCALERA). - A Pleospora Silenes Earle diversa; Pleosporae sororiae Bubàk proxima.

12. Pleospora Stellariae Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6688 (1914) p. 203.— Peritheciis subepidermicis, immersis, globosis, 160-270 µ diam., nigris, papilla crassa erumpentibus, excipulo tenui, pseudoparenchymatico, nigrofusco; ascis clavatis, apice attenuatorotundatis, non incrassatis, basi breviter pedicellatis, 100-130 \* 22-28, paraphysibus filiformibus densis, apice arcuatis obvallatis; sporidiis distichis, oblongis, utrinque rotundatis, 4-5-septatis, ad septa constrictis, dimidia parte inferiore angustiore, loculis 2-4 septo longitudinali unico saepeque continuo divisis, brunneis, 26-40 \* 11.19.

Hab. in caulibus vetustis Stellariae Lesserti (Caryophyllaceae), prope Tel Tenenir in Mesopotamia — Cum Pl. Casaliana, cuius diagnosis incompleta, tantum comparanda; differre

videtur ascorum forma et peritheciis majoribus.

13. Pleospora nidulans Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 6689 nos Aires XXIII p. 62 (1912). - Peritheciis hypophyllis, innatoerumpentibus, villo occultis, aegre perspicuis, globosis, 250 µ diam., atris, membranaceis, obsolete ostiolatis (astomis?), contextu grosse parenchymatico, atro-olivaceo; aseis clavatis, antice obtusissime rotundatis crassiusculeque tunicatis, infra attenuatis, breviter crasseque pedicellatis, 120-130 × 30, aparaphysatis; sporidiis utrinque subacutiuscule rotundatis, primo hyalinis didymis dein flavidis 3-5septatis, serius fuscis 7-septato muriformibus, ad septum medium tantum validiuscule constrictis, 32-38 × 15-18, septis longitudinalibus, 1 vel 2, interruptis.

Hab. in foliis languidis vel emortuis Chuquiraguae histricis (Compositae), in aridis Chubut, Patagonia, nec non Ch. erinaceae in dumetis Potrerillos prope Mendoza, Argentina.

14. Pleospora Inulae-candidae Jaap, Ann. Mycol, XIV, 1916, p. 16 - 6690 Peritheciis gregariis, erumpentibus, nigris, globosis, 100-200 µ diam., ostiolo conoideo; contextu atro-brunneo, ascis late clavatis, sessilibus, apice rotundatis,  $70 \times 20$ , ex evasione sporidiorum 140  $\mu$ usque elongatis, 8-sporis; paraphysibus copiosis, filiformibus, 2-3,5 µ er. pluriguttulatis; sporidiis oblongis, 22-25 × 8-10, typice 5-septato-muriformibus, medio constrictis e flavido brunneis, irregulariter distichis.

Hab. in foliis vetustis Inulae candidae (Compositae), in peninsula Lapad pr. Ragusa (JAAP, BORNMÜLLER). - Ab affini Pl. media sporidiis postremo opace brunneis dignoscitur.

15. Pleospora bubakiana Jaap, Ann. Mycol. XIV, 1916, p. 16. - Peri- 6691 theciis gregariis, subcutaneo-erumpentibus, nigris, globosis, coriaceo-membranaceis, ostiolo minuto papillato, 200-300 µ diam.; contextu brunneo-nigricanti; ascis clavatis apice rotundatis, breviter pedicellatis, 70-85 \* 12-15, octosporis; sporidiis oblongo-obovatis v. oblongo-ellipsoideis, flavido-viridulis dein flavido-brunneis; 5-6septato-muriformibus, vix constrictis, 15-18 \* 7-8, oblique dispositis.

Hab. in fructibus vetustis Juniperi Oxycedri (Coniferae), in Ins. Arbe Dalmatiae.

16. Pleospora Thujae Grove, Journ. of Bot. L (1912) p. 49. - Peri- 6692 theciis sparsis, emergentibus, rotundatis, 150 µ diam., ostiolo minuto perforatis, atris, glabris, nitidis, contextu parenchymatico obscure olivaceo; ascis oblongis, breviter pedicellatis, 70.90 \* 20, ver-

tice rutundatis; sporidiis distichis, flavis, oblongo-clayatis, muriformibus, basi attenuatis, 20-25 \* 7-9, junioribus inaequaliter uniseptatis, hyalinis, ad septum constrictis ad instar Sphaerellae, dein 4.5-septatis, loculis 1-3 septo longitudinali divisis, ad septum primarium semper evidentissime constrictis.

Hab. in pagina exteriore squamarum coni Thujae occid e n t a l i s (Coniferae), socia Pestalozzia conigena, Studley Castle, in Britannia.

17. Pleospora mesopotamica Bubàk, Annales Naturh. Hofmas. Wien, 6693 XXVIII (1914) p. 201. — Peritheciis in maculis griseis elongatis sparsis, subepidermicis, globosis, ostiolo brevi crasso erumpentibus nigris, coriaceis, 180-270 µ diam., contextu tenui, distincte pseudoparenchymatico, atro-fusco; ascis clavatis, apice rotundatis, basi breviter attenuato-pedicellatis, 150-200 \* 35-48; sporidiis subdistichis, ovoideo-ellipsoideis vel oblongis, 40-53 \* 17-21, flavo-brunneis, transverse 5-7 longitudinaliter 1-3 septatis, ad septa omnia constrictis.

Hab. in caulibus ramisque subemortuis E p h e d r a e A l t e (Gnetaceae), in Mesopotamia. — Peritheciis eximie globosis, coriaceis sporidiisque ad septa omnia constrictis praecipue distincta.

18. Pleospora media Niessl. - Sacc. Syll. II p. 244. - var. ephedrina 6694 Trotter, Nuovo Giorn. Bot. it. 1916 p. 16, cum icon. - Peritheciis erumpenti-prominulis, gregariis, 160 200 µ cr., contextu distincte parenchymatico, brunneo; ascis cylindraceo-clavatis, rectis v. curvulis, brevissime stipitatis, tunica apice crassiuscula (2,5·3 μ) praeditis, 85-100 \* 25-30, ? aparaphysatis; sporidiis distichis primum flavescentibus, uniseptatis, dein flavo-brunneis, transverse 5.6 septatis, medio constrictis, subovoideis, loculis omnibus vel plurimis septo longitudinali mediano percursis, 24-26 × 12-15.

Hab. in ramulis emortuis Ephedrae altissimae (Gnetaceae), prope Rumia in Geb. Jefren, Tripolitaniae.

19. Pleospora xerophila Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6695 Buenos Aires XXIII p. 63 (1912). — Peritheciis sparsis vel laxe gregariis, parenchymate immersis, erumpentibus, globosis, 120-280 µ diam., atris, membranaceis, late ostiolato-pertusis, non papillatis, contextu grosse parenchymatico fusco-olivaceo; ascis paucis, cylindraceis, breviter crasseque pedicellatis, 80.180 × 25.30, aparaphysatis; sporidiis distichis, ellipsoideo-obovatis, utrinque rotundatis, saepe e latere leniter compressis, 28-35 × 14-16 × 10-12, 3-septatoconstrictis, olivaceis, loculo centrali supero saepius longitudinaliter

septato, loculo infimo acutiore, saepe septo secundario transverse diviso.

Hab. in culmis vaginisque Boutelouae lophostachyae (Graminaceae), nec non Scleropogonis brevifolii in aridissimis circa Potrerillos prope Mendoza, Argentina-

20. Pleospora turkestanica Rehm, Ascom. Exsicc. Fasc. 48, n. 1943 et 6696 Ann. Mycol. IX, 1911, p. 369. — Peritheciis in maculis late denigratis gregarie innatis, dein erumpentibus, denique sessilibus, globuloso-conoideis, atrìs, glabris, 0,15 mm. diam., crasse parenchymatice fusce contextis; ascis clavatis, subcurvatis, octosporis, 100-110 × 22-25; sporis oblongis v. subclavatis, utrinque rotundatis, transverse quadriseptatis, nempe superiore dimidia parte 1-septatis, cellula suprema ceteris majore, secunda latiore, parte inferiore biseptata, demum cellulis 3 mediis semel longitudinaliter divisis, ad septa subconstrictis, flavis, senilibus nigrofuscis, 25·30 × 12-15, biseriatis; paraphysibus filiformibus septatis 3 μ cr.

Hab. ad culmos Lasia grostidis splendentis (Graminaceae), Celkar (Tschelkar) pr. Turgaj, Turkestania (Androssow). — Pl. rudis Berl. sporarum divisione subsimilis, attamen satis diversa.

21. Pleospora Miscanthi H. S. Yates, Philipp. Journ. Sc. XII (1917) 6697 p. 377. (corr. Pl. Miscanthiae).— Culmicola, superficiem culmi obtegens, velutina, atra, mycelio ex hyphis obscure brunneis, 6-10 μ crassis composito; peritheciis paucis, atris, laevibus, 100-200 μ diam.; ascis clavatis, 140 μ longis 26-32 μ crassis, octosporis, paraphysatis; paraphysibus filiformibus, hyalinis; sporidiis muriformibus, oblongo-fusoideis, hyalinis, 16-20-septatis, 60-70 × 10-12; conidiophoris erectis, 350-400 × 6-8; conidiis brunneis, 9-11-septatis, 75-90 × 10-12.

Hab. in culmis Miscanthi japonici (Graminaceae), Bontoc Luzon, Ins. Philipp.

22. Pleospora kurdistanica Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6698 (1914) p. 201. — Peritheciis sparsis, subepidermicis dein nudis, atris, globosis, 200-250 μ diam., ostiolo breviter papillato, excipulo crasso, pseudoparenchymatico, atro-fusco; ascis paucis, ellipsoideis vel oblongis, brevissime pedicellatis, 90-120 × 35-45 (in peritheciis) tenue tunicatis, paraphysibus filiformibus obvolutis; sporidiis aggregatis, ellipsoideis vel ellipsoideo-oblongis, utrinque rotundatis, brunneis, 43-48 × 18-22, transverse 7-8-septatis, longitudinaliter 2-3 septatis, non vel parum medio constrictis, dimidia parte superiore majore.

Hab. in caulibus pedunculisque Salviae caespitosae

(Labiatae), in monte Ak Dach, Tauro cataonico, in Kurdistania occidentali.

23. Pleospora Dearnessii Sacc, Ann. Mycol. XII, 1914, p. 297. Pe- 6699 ritheciis gregariis, subcutaneis, parce erumpentibus, globulosis 400 u diam., intus initio albis dein griseo-atris, ostiolo brevi minuto: ascis cylindricis, apice rotundatis, breviter obtuse stipitatis, 140-150 × 11-12, filiformi-paraphysatis, octosporis; sporidiis monostichis oblongo-ellipsoideis, utrinque subrotundatis, 3-5-septato-muriformibus, 18-20 × 8-10, non v. vix constrictis fuligineis.

Hab, in ramis emortuis Linderae Benzoin (Lauraceae), London Ont., Amer. bor. (J. Dearness), - A typo generis habitu potius quam characteribus deflectit. Pl. Bardanae var. Pla tani Sace. affinis.

24. Pleospora escaleriana Gz. Fragoso, Bol. R. Soc. Españ. Hist. nat., 6700 t. 18., 1918, p. 80. — Peritheciis numerosis, crebre sparsis, atris, subglobosis vel oblongis, usque 270 µ diam., non vel vix papillatis, ostiolo pertusis, primum velatis, demum superficialibus, contextu atro-fuligineo, indistincte parenchymatico; ascis paucis, oblongis in pedicello brevi attenuatis, 105-140 × 60-70, octosporis, paraphysibus filiformibus obvallatis; sporidiis irregulariter distichis, brunneis, oblongis, horizontaliter 5-8-septatis, a septum medium constrictis, coeteris leniter constrictis, 50-60 × 21-24.

Hab, in rachidibus siccis Astragali florulenti Boiss. et Hauck (Leguminosae), prope Kouh-Cherri, Persia (FERD. MARTI-NEZ DE LA ESCALERA). - A Pleospora chlamydospora Sacc., P. rudis Berl. et P. mesopotamica Bubàk, diversa.

25. Pleospora kouh-sefidica Gz. Fragoso, Bol. R. Soc. Españ. Hist. nat. 6701 t. 18., 1918, p. 81.-- Peritheciis sparsis, tectis, dein erumpentibus, atris, globoso-oblongis, plerumque 200-225 µ diam., ostiolatis, parietibus crassiusculis, contexta pseudoparenchymatico; ascis paucis, ellipsoideo oblongis, brevissime pedicellatis, usque 120 × 50, octosporis, tenuiter tunicatis, paraphysibus hyalinis obvallatis; sporidiis subtristichis vel conglobatis, brunneis, ellipsoideis, utrinque rotundatis, usque 42 × 21, plerumque 7-septatis, constrictulis, longitudinaliter 3-septatis.

Hab. in rachidibus caulibusque Astragali rhodosem i Boiss. et Hauck (Leguminosae), prope Kouh Sefid, Persia (FERD. MARTINEZ DE LA ESCALERA). - Pleosporae kurdistanicae Bubàk, proxima sed diversa; a Pleospora kouk-cherrica differt ascis amplioribus, etc.

26. Pleospora coluteicola Gz. Frag., Fungi Horti Matrit. p. 15 (1917). - 6702 Peritheciis sparsis, epidermide tectis, ostiolo erumpentibus, globosis v. globoso-oblongis, vix papillulatis, atris, contextu crassiušculo parenchymatico fuligineo, 150-175  $\mu$  diam. v. 175  $\approx$  100; aseis clavatis, 70-85 \* 12-14; paraphysibus filiformibus paucis, ramosis; sporidiis distichis, primum subhyalinis, dein olivaceo-castaneis, semper 3-septatis, loculis mediis longit. 1-septatis, ovoideo-oblongis, v. subfusoideis, 18-22 \* 9-11, ad septum medium constrictis.

Hab. in ramulis emortuis Coluteae tragacanthoid is (Leguminosae), in Horto bot. Madrid, Hispaniae, socia Phoma coluteicola (CABALLERO).

27. Pleospora Coronillae Severini, Annali di Botanica v. XI, 1913, 6703 p. 196. — Peritheciis gregariis, peridermio tectis, demum erumpentibus, globoso-depressis, atris 0,5-0,7 mm. lat., coriaceis, osculo umbonato pertusis. Ievibus; ascis cylindraceo-clavatis, subrectis v. arcuatulis, 8-sporis, 190-230 × 12; sporidiis monostichis, ellipsoideis, obtuse rotundatis, 3.4 transverse septatis, medio constrictis, in longitudine uniseptatis, olivaceo melleis, 20-25 \* 10-11.5; paraphysibus filiformibus, simplicibus ascos aequantibus.

Hab. ad ramos emortuos Coronilla e Emeri (Leguminosae), in « Monticelli » prope Perusiam, Italiae Centr.

28. Pleospora njegusensis Bubàk, III. Beitr. Pilz. Montenegro, in Bo- 6704 tanikai Közlemenyek, 1915, p. (60). - Peritheciis dispersis vel approximatis, immersis, epidermide tectis, globoso-applanatis, 200-300 µ in diam., coriaceis, nigris, apice conico parum erumpentibus. contextu crasso, pseudoparenchymatico, extus nigro-olivaceo, paneistratoso, intus hyalino, pluristratoso; aseis oblongis vel oblongoclavatis, 130-150 × 34-38, sursum non vel parum attenuatis, basi breve pedicellatis, crasse tunicatis, apice non incrassatis, octosporis, paraphysibus filiformibus obvallatis; sporidiis oblique distichis, oblongis vel oblongo-ovoideis, 38-48 × 15-19, medio parum constrictis, utrinque rotundatis, dense muricatis, transverse 8-10 septatis, longitudinaliter 2-3 septatis, dimidio superiore latiore, initio flavomelleis, postea fusco-brunneis, opacis, muco hyalino, tenui obvolutis.

Hab. ad ramos et caules Genistae sericeae (Leguminosae) vivae, Njegusi, Montenegro.

29. Pleospora Lespedezae Miyake, Bot. Mag. Tokyo, XXVIII (1914) 6705 p. 41, tab. 1 fig. 4.5. - Peritheciis sparsis, initio epidermide tectis, dein ostiolo papillato erumpentibus, atris, globosis vel ellipsoideis, 160-200 μ diam., contextu pseudoparenchymatico; ascis late clava-

tis vel ovoideis, rectis vel curvulis, brevissime pedicellatis, octosporis,  $72.80 \times 32.36$ , paraphysibus hyalinis, filiformibus, apice incrassatis, septatis intermixtis; sporidiis irregulariter distichis, ellipsoideis vel fusoideis, 3-septatis, ad septum medium constrictis, loculis duobus centralibus longitudinaliter divis, obscure brunneis,  $28.34 \times 12.17$ .

Hab. in caulibus Lespedezae bicoloris (Leguminosae), Pohuasan, Yenpinshen, Shuntien-fu in China.

30. Pleospora rehmiana Staritz, Verh. Bot. Ver. Prov. Brandenb., LV 6706 (1913) p. 82.— Peritheciis immersis, demum subliberis Pleosp. vulgari similibus, sparsis; ascis cylindraceo-clavatis vel oblongo-clavatis, 127 × 36 ca., crassiuscule tunicatis; sporidiis polystichis, medio valde constrictis, dimidia parte crassiore, rotundata vel attenuata, altera semper rotundata, luteo-brunneis, transverse 7-septatis, plerumque septis longitudinalibus copiosis, 31-37 × 14,5-16.

Hab. in caulibus Medicaginis sativae (Leguminosae), prope Alten, Anhalt, Germania. — Pl. vulgari et Pl. maireanae valde affinis.

31. Pleospora Prosopidis Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6707 (1914) p. 202. — Peritheciis sparsis, globosis, initio tectis dein nudis, atris, 180-250 μ diam., excipulo crasso, pseudoparenchymatico, nigro-fusco; ascis cylindraceo clavatis, rectis vel curvis, distincte pedicellatis, crasse tunicatis, 110-150 × 28-32, paraphysibus filiformibus obvallatis; sporidiis distichis, oblongo-ovatis, rectis vel infra curvatis, utrinque rotundatis, brunneis, 28-35 × 11-13, transverse 4-septatis, ad septa constrictis, loculo secundo maximo loculis mediis duobus vel tribus longitudinaliter semel divisis.

Hab. ad caules emortuos Prosopidis Stephaniana e (Leguminosae), in Syria et ad confines Mesopotamiae et Arabiae borealis.

32. Pleospora Rufescentis Vouaux, Ball. Soc. Mycol. de Fr., 1913, p. 6708 124. — Peritheciis plerumque 4-12 aggregatis, immersis v. papilliformi prominulis, nigris, subsphaeroideis, 180-312 μ diam.; contextu brunneo-nigrescenti, crasso, pseudoparenchymatico e cellulis polygoniis 6-8 μ cr. et crasse tunicatis efformato; ascis clavatis breviter crasseque pedicellatis, apice late rotundatis, crasse tunicatis, octosporis v. etiam usque bisporis, 92-120 × 21-24; paraphysibus numerosis parum septatis, parce ramosis, hyalinis v. flavidulis, ascos superantibus, 3,5-4 μ cr.; sporidiis oblique monostichis, curvulis v. subassimetricis, primum continuis hyalinis, dein 1-septatis

v. brunneis et 3 septatis, demum brunneo-melleis plerumque 3-raro 4-5 septatis et etiam septo longitudinale plus minus distincto praeditis, ad septa constrictis, loculis grosse uniguttulatis, 22-29 \* 10-13.

Hab. in thallo Peltigerae rufescentis (Lichenes), in sabulosis, Malo-Centre, Gallia bor. (BOULY DE LESDAIN).

33. Pleospora Crozalsii Vonaux, Bull. Soc. Mycol. de Fr., 1913, p. 6709 124. — Peritheciis sparsis, parum numerosis, ostiolo papilliformi tantum emergentibus, subsphaeroideis, 100-150 μ diam.; contextu tenui, brunneo, e cellulis polygoniis irregularibus 5-6 μ cr. efformato; ascis clavatis, distincte breviter noduloseque pedicellatis, octosporis, tunica apice incrassata praeditis, 58-68 × 13-15; paraphysibus parcis, filiformibus, sinuosis, parce ramosis septatisque, sporas subaequantibus; sporis distichis, utrinque late rotundatis; subovoideis, primum hyalinis et 1-septatis dein brunneis et 3-septatis, demum pallide brunneis et plerumque 4-5 septatis, et in uno v. duobus loculis longitudinaliter uniseptatis, ad septa praecipue ad medium constrictis, 16-21 × 6-7.

Hab. in thallo Stietinae sylvaticae (Lichenes), Caisserols-le-Haut, Herault, Gallia (A. DE CROZALS).

34. Pleospora baldratiana Baccarini, F. Eritr. II n. 82, in Pirotta Ann. 6710 Bot. 1917. — Peritheciis sparsis sub epidermide nigrefacta ac lacerata nidulantibus, mediocribus, contextu parenchymatico fuligineo; ascis clavatis, breviter pedunculatis, paraphysibus filiformibus, cito evanidis, obvallatis (80.91 × 24); sporidiis ellipsoideis paululum asimmetricis, transverse triseptatis, loculo mediano longitudinaliter oblique uniseptato.

Hab. in foliis siecis Dracaenae Ombet Kotschy et Peyr. (Liliaceae), ad Arbaroba, Erythraea (BALDRATI).

35. Pleospora bobanensis Bubàk, III. Beitr. Pilz. Montenegro, in Bo-6711 tanikai Közlemények, 1915, p. (60). — Peritheciis gregariis, semi-immersis, epidermide tectis, globosis, 220-280 μ in diam., apice sub-conica, postea poro apertis, parietibus crassissimis, contextu intus hyalino, crasso, extus atro-fusco, ascis oblongis, 150-180 × 35-38, crasse tunicatis, ad apicem parum attenuatis, ibidemque rotundatis et incrassatis, brevissime stipitatis, octosporis, paraphysibus filiformibus obvallatis; sporidiis tristichis vel rarius subtristichis, oblongo-fusoideis, 40-48 × 15-19, 7-8 septatis, non vel parum ad septa constrictis, parte superiore parum latiore, septis longitudinalibus 2-3 instructis, muco anguste obvolutis, brunneo-flavidis.

Hab. ad caules emortuos Veratri Lobeliani (Lilia-

eeae), in Monte Studena ad Boban (distr. Drobnjakensis), Montenegro.

36. Pleospora Lycopodii Lind, Dan. Fungi, p. 227 t. IV f. 44 (1913).— 6712 Peritheciis in matrice sparsis, subglobosis, glabris, 250 μ diam., depressis, atris, coriaceis, obtuse papillatis; ascis cylindraceo-clavatis, crasse tunicatis, brevissime stipitatis, 72-76 × 16-18, octosporis, aparaphysatis; sporidiis distichis, ellipsoideis, horizontaliter 3-5-septatis, verticaliter imperfecte 1-septatis, ad septa constrictis 24-26 × 7-9, melleo-fuligineis.

 $\it Hab.$  in foliis emortuis Lycopodiaceae), in Dania. — Socia adest  $\it Coniothyrii$  spec. sporulis 3-4  $\mu$  diam. An paraphyses jugiter deficientes?

37. Pleospora Magnoliae Massa in Ferraris e Massa, Ann. Mycol. X, 6713 1912, p. 287, tav. IV fig.  $6^{1\cdot 2}$ . — Peritheciis membranaceis nigris 140-180  $\mu$  diam.; ascis clavatis, breviter pedicellatis, apice rotundatis,  $130 \times 20$ , octosporis; sporidiis fuligineo-fuscis, 3-5-septatis et loculis a septo longitudinali divisis, leniter et irregulariter ad septa constrictis,  $24\cdot27\times12$ .

Hab. in foliis Magnoliae grandiflorae (Magnoliaceae), Firenze, Italia med. (MICHELINI).

38. Pleospora saccoboloides Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6714 Buenos Aires XXIII, p. 62 (1912).— Peritheciis amphigenis, sparsis, parenchymate innatis, prominulo-erumpentibus, lenticularibus, 200-250  $\mu$  diam., coriacellis, non collabentibus, vix ostiolato-papillatis; ascis cylindraceis, brevissime crasseque pedicellatis, 120-130  $\approx$  30, crasse tunicatis, transverse ad tertium vel quartum inferum dehiscentibus, aparaphysatis; sporidiis ellipsoideis, 7-9-septato-muriformibus, ad septum medium valide, ad caetera leniter constrictis, primo aureis dein fuligineis, 30-34  $\approx$  16-17, ex ascis in massam mucosam cylindricam 120  $\approx$  25  $\mu$  protrudentibus.

Hab. in foliis dejectis putrescentibus Ficus subtriplinervi (Moraceae), in hortis, La Plata, Argentina.—Species generis dubioso Diplothecae Starb. facile pertinens ob sporas conglobatim expulsas, sed forma haec etiam in Pl. herbarum passim non rara.

39. Pleospora Eriobotryae Cristofoletti, in Stazioni Sper. Agr. it. v. 6715 XLVI, 1913, p. 627. — Perithecia sparsa, pauca, per epidermidem erumpentia, dein fere omnino nudata, cuboideo-depressa, ostiolo papillato vertice obtuso, glabra, 236-290 μ lat.; asci tenue clavati, subcurvi, octospori, parce paraphysati, 148 × 17; ascosporae disti-

chae, oblongae, murali-divisae, flaviusculae, 35 × 13.

Hab. in maculis rotundis aridis foliorum vivorum Eriobotrya e ja ponica e (Rosaceae), Roma, Italia. — St. ascoph. Macrosporii Eriobotryae Crist.

40. Pleospora spiraeina Bubàk, Ann. Mycol. XIII, 1915, p. 26.— Peritheciis cortici immersis, apice conico-erumpentibus, globosis, parum applanatis, ambitu rotundatis vel oblongis, nigris, opacis, 200-270 μ in diam., contextu atrobrunneo, pseudoparenchymatico; ascis elavatis, 75-105 × 15-20, apice rotundatis, basi in pedicellum brevem attenuatis, octosporis. Sporidiis distichis, ellipsoideo-fusiformibus, 24-31 × 8-9,5, 7-septatis, loculis nonnullis longitudinaliter uniseptatis, dimidio superiore latiore, utrinque attenuato-rotundatis, saturate luteo-brunneis.

Hab. ad ramos Spiraeae opulifoliae (Rosaceae), Eisgrub, Moravia (H. ZIMMERMANN).

41. Pleospora Gailloniae Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6717 (1914) p. 200. — Peritheciis sparsis, subepidermico-erumpentibus, breve papillatis, globosis, atris, 150-200 μ diam., contextu pseudo-parenchymatico nigro-fusco; ascis clavatis, apice rotundatis, 75-120 × 35-38, paraphysibus filiformibus, apice ramosulis curvatis obvallatis; sporidiis subtristichis, ellipsoideo-oblongis, utrinque late rotundatis, brunneis, 35-43 × 17-19, transverse 5-septatis, longitudinaliter cellulis nonnullis vel omnibus septo unico, saepe continuo divisis, ad septa constrictis, dimidia parte inferiore magis angusta, muco hyalino fortiter intumescente obvolutis.

Hab. in cortice vetusto Gailloniae Olivieri (Rubiaceae), inter Hatra et Asiur in Mesopotamia.— Ob sporidia 5-septata et muco obvoluta facile distinguenda.

42. Pleospora canariensis Speg., Anal. Mus. Nac. Buenos Aires, XXVI 6718 p. 125 (1914). — Peritheciis plagulis atratis adnatis, primo tectis sed mox denudatis, liberis, globoso-depressis, 250-300 μ diam., glaberrimis, non collabescentibus, contextu subcarbonaceo atro; ascis cylindraceis, brevissime crasseque cuneato-pedicellatis, 140-150 × 30, mox diffluentibus, pseudoparaphysibus (?) paucis mucosis immixtis; sporidiis oblique distichis, ellipsoideis, 40 × 20, transverse saepius 5-septato-constrictis, loculis extimis longitudinaliter 1-2-, mediis 3-4-septatis, primo flavidis dein fumoso-atris, pellucidis.

Hab. in ramis aridis subputrescentibus Plocamae pendulae (Rubiaceae), in collinis, Las Palmas, ins. Canar.

43. Pleospora batumensis Naumow, Bull. Soc. Mycol. de Fr. 1912, p. 6719

56 c. icone. - Peritheciis sparsis vel gregariis (circiter 20), immersis, dein erumpentibus, subglobosis, 120 × 100. Cellulis pseudoparenchymaticis, peritheciis 12-20 µ diam.; ascis piriformibus, paucis, octosporis, irregulariter biseriatis, 50 \* 27. Sporidiis hyalinis, ellipticis, 5-septatis, loculis 2-3-4 mediis in longitudine 1-septatis, non vel vix constrictis, 30 \* 12.

Hab, ad petiolos foliorum in maculis suberosis Citri (Rutaceae), Batum, Rossia austr.

44. Pleospora Pegani Bubak, Ann. Naturh. Hofmus, Wien, XXVIII 6720 (1914) p. 202. — Peritheciis subepidermicis dein nudis, globosis, atris, 160-250 \(\mu\) diam., contextu pseudoparenchymatico atro-fusco; ascis oblongo clavatis, 90-130 \* 26-38 (in perithecio) breviter pedicellatis, paraphysibus crebris filiformibus cinctis; sporidiis subdistichis, oblongo ellipsoideis vel late fusoideis, aliis minoribus 28-38 × 11-17, 4-rarius 5-septatis, aliis majoribus 38-50 × 18-23, 5-7-septatis, longitudinaliter loculo medio tantum, vel 2-3, vel etiam omnibus uno septo instructis, in parte inferiore curvatis, ad septa non vel paparum constrictis, strato mucoso hyalino 3-4 µ crasso obvolutis.

Hab. in cortice Pegani Harmalae (Zygophyllaceae), ad confines Mesopotamiae et Arabiae orientalis.-- Forma et mensuris sporidiorum valde ludibundis saeve in uno et ipso perithecio. - Verisimiliter status metagenetici sistunt: Microdiplodia Pegani Bub., Camarosporium Pegani Bub. et Hendersonia Pegani Bub.

45. Pleospora herbarum (Pers.) Rabh. - Syll. II, 247 - fm. Solidagi 6721 nis Gonz. Frag. in Trab. Mus. Nac. Cienc. Natur., ser. Bot. n. 4 (1914) p. 22 extr. — Sporidiis 6-7-septatis, septis longitudinalibus irregularibus percursis, ad septum medium constrictis, muriformibus, fusco-castaneis, 28-35 \* 12-15.

Hab. in caulibus siccis Solidaginis Virgaureae var. c a m b r i c a e (Compositae), in montibus Carpetanis, Hispania (BELTRAN). - fm. Nepetae Gz. Frag., loc. cit. - Peritheciis usque ad 300 µ diam., sporidiis subdistichis, primum 3-septatis loculis mediis septo longitudinali unico percursis, dein 6-7-septatis, longitudinaliter 2-septatis,  $20-25 \times 10-12$ .

Hab. in caulibus ramulisque Nepetae Nepetellae (Labiatae), in montibus Carpetanis, Hispania. - A typo differt sporidiis sensim minoribus saepe tantum 3-septatis etsi, ut videtur, maturis.

- Var. Coronillae Gz. Frag., Fungi Horti Matrit. (1917) p. 18. - Peritheciis usque ad 250 µ diam.; ascis 130 × 21; sporidiis 5-7-septa-

tis, muriformibusque, 28 \* 12, distichis.

Hab. in ramulis emortuis Coronilla e e moroidis (Leguminosae), in Horto bot. Madrid, Hispania.

— Var. Genistae-ibericae Gz. Frag., Fungi Horti Matrit. p. 18 (1917) — Peritheciis majusculis, demum superficialibus, 300 μ diam.; ascis paraphysatis, 130 × 30; sporidiis distichis raro oblique monostichis, ovoideo oblongis sursum latioribus e melleo fuligineis, initio 3- demum 7-septatis, 25 × 12.

Hab. in ramulis siccis Genistae ibericae (Leguminosae), in Horto bot. Madrid, Hispaniae.

— Var. Halimodendri Gz. Frag., Fungi Horti Matrit. (1917) p. 18. — Peritheciis 140-250 μ diam., vix papillulatis; ascis 90-125 × 18-24; sporidiis distichis oblongis, utrinque tenuatis, e flavido fuligineo eastaneis, 5-7, septatis, longitrorsus 1-2 septatis, medio constrictis, 32 × 12.

Hab. in ramulis emortuis Halimodendri argentei (Caraganae) (Leguminosae), in Horto bot. Madrid Hispaniae (A. CABALLERO).

— Var. asperulina Bubàk in Ann. Naturh. Hofmus. Wien, XXVIII (1914) p. 201. — Peritheciis applanatis, rotundatis vel oblongis, 0,5 mm. usque longis; ascis clavatis, 120-150 × 38; sporidiis tristichis, 7-septatis, medio constrictis, 38-47 × 19.

Hab. in caulibus emortuis Asperulae asperae (Rubiaceae), ad cacumen montis Meleto in Tauro armenio, Kurdistania media, alt. 2900-3100 m.

— Var. Cleomes Bubàk, loc. cit. — Sporidiis circa 35  $\mu$  longis, 15-19  $\mu$  latis, 5-6-septatis, brunneis.

Hab. ad caules emortuos Cleomes glaucae (Capparidaceae), inter Abukemal et Ramadi ad confines Mesopotamiae et Arabiae borealis.

- 46. Pleospora infectoria Fuck. Syll. Fung. II p. 265 var. Stipae 6722 Trabut, Etude sur l' Halfa, Alger an. 1889, p. 48, tab. XVI fig. 3.— A typo differt paraphysibus longioribus. Hab. in foliis S t i p a e t e n a c i s s i m a e (Graminaceae), Algeria.
- Var. nigriseda Rehm, Fungi cancas. novi, Monit. Jard. bot. Tiflis XXV (1913) p. 13. Peritheciis in maculis dilute nigrescentibus tumidulisque, 3-5 mm. latis gregarie innatis, minutissime papillulatis, 150 μ diam. Caetera ut in typo.

Hab. in culmis Junci Gerardii (Juncaceae), Prov. Baku, distr. Dzevat in monte Kalmas, Caucaso (G. Wordonow).

47. Pleospora oligomera Sacc. et Speg. — Sacc., Syll. II p. 241. — f. 6723 Phlomidis Gonz. Frag., Flor. Hispal. Microm. in Trab. Mus. Nac. de Cienc. Nat. Madrid Ser. Bot. n. 10, 1916, p. 93. — Peritheciis et ascis ut in typo; sporidiis distichis, 3-septatis, loculis penultimis longitudinaliter divisis, succineo-flavidis, 22-25 × 9,5-10.

Hab. in ramulis emortuis Phlomidis purpure a e (Labiatae), prope Pedroso de la Sierra, Sevilla (Hispania).— Socia Sphaerellae Phlomidis Bubàk et Fragoso et Phomae hispalensis Bubàk et Fragoso.

— Var. australis Trotter, Nuovo Giorn. bot. it. 1916, p. 16. — Peritheciis hinc inde laxe gregariis, innato-erumpentibus, dein subsuperficialibus, subglobosis, demum depressis, umbilicato-collapsis, 130-210 μ circ. diam., basi saepe hyalinis fuligineis ramosis septato-subtorulosis 6-7 μ cr. cinctis; ascis clavato-cylindraceis supra rotundatis, basi brevissime angustato-stipitatis, 60-70 × 16-19, octosporis; paraphysibus filiformibus hyalinis guttulatis, 2-2,5 μ cr., ascos vix superantibus; sporidiis subdistichis elongato-ellipsoideis, ad septa constrictis, primum 1-septatis flavo-brunneis, 15-18 × 6,5-7, dein 3-septatis obscurioribus et 20-22 × 10-12, demum subfuligineis 3- raro 4-septatis et longitudinaliter plus v. minus distincte 1-septatis.

Hab. in caulibus languentibus Malcomiae aegyptiacae var. longisiliquae Coss. (Cruciferae), in sabulosis Sidi Abd el Cherim prope Tagiura, Tripolitania.

CLATHROSPORA Rabenh. - Syll. IX p. 894, XVI p. 548, XXII p. 277.

1. Clathrospora Pteridis J. Lind, Ann. Mycol. XIII, 1915, p. 22 fig. 3.— 6724 Peritheciis sparsis, superficialibus, minutis, globoso-depressis, ostiolo minuto; ascis clavato-cylindraceis, sursum latiuscule rotundatis basi in stipitem brevissimum, nodulosum attenuatis, octosporis, 110-120 \* 16-18; sporidiis distichis vel inferne submonostichis, e fronte piriformibus, vix inaequilateralibus, basi acutiusculis, transverse 4-septatis, loculis mediis centro septo longitudinali divisis, 25 \* 12, e latere cylindraceis, 8 μ crassis, luteis.

Hab. in caulibus siccis Pteridis aquilinae (Filices), Тугvää, Fennia (VAINIÖ НЕІКІМНЕІМО). — Cl. pentamerae (Karst.) Berl. proxima.

COMOCHLATRIS F. E. Clements, Minnesota Bot. Stud., P. II, v. IV, 1911, p. 186; Genera of Fungi 1909, p. 173 (nomen) (Etym. chome

quia pilosa et clathris, i. e. Clathrospora pilosa; est etiam Pocosphaeria sporis applanatis). — Perithecia plerumque gregaria vel copiosa, tecta vel mox epidermide evanida superficialia, membranacea vel submembranacea, globosa, vix aut non papillata, nigra, setosa. Paraphyses filiformes vel clavulatae. Sporae ellipticae ovoideaeque, applanatae, muriformes, aureae vel brunneae.

1. Comochlatris Ipomocae F. E. Clements, l. c. p. 186. — Pyrenophora 6725 Ipomocae F. E. Clements, Crypt. Format. Colorad. 450. — Peritheciis gregariis vel copiosis in areis nigricatis indeterminatisque diu vel persistenter tectis, membranaceis, globosis dein cupulato-collapsis, inferne setis brunneis simplicibus brevibus vix septatis 100-120 × 46, crebre circumdatis, superne calvis, magnis, 400-500  $\mu$  diam.; aseis octosporis, clavulato-cylindricis, stipitatis, 75-100 × 15; paraphysibus numerosis, filiformibus; sporis oblique monostichis vel distichis, applanatis, oblongo-ovoideis, 4-septatis, 2 cellulis internis latioribus longitudinaliter 1 divisis, ad septa constrictulis, 20-24 × 9-10, acie 6-7  $\mu$ .

Hab. in caulibus vetustis I pomoeae leptophyllae (Convolvulaceae), Wray, 1100 m., Amer. bor. (sub nomine Pyrenophora Ipomoeae, Cryptogamis Formationum Coloradensium edita n. 450).

2. Comochlatris lanata F. E. Clements, l. c. p. 186, tab. XXV fig. 1.— 6726
Peritheciis plerumque gregariis, teetis, deinde epidermide evanida superficialibus, submembranaceis, depresso-globosis, ostiolatis, vix vel non papillatis, setis simplicibus rigidis multiseptatis fumosis versus apicem pallidioribus, raro distincte asperulatis, 150-250 × 4-5 in epidermide radiatim fixis dense obsitis, nigris, 250-450 μ diam.; ascis octosporis, late clavulatis vel oblongis, breviter stipitatis, 100-125 × 20-25; paraphysibus paucis, filiformibus superne clavulatis; sporis irregulariter distichis, applanatis, ellipsoideis vel ovoideis, 5-septatis, 4-cellulis internis longitudinaliter 1-divis, vix vel non constrictis, 24-27 × 15, acie 6-7 μ.

Hab. in caulibus vetustis Leptotaeniae multifidae (Umbelliferae), Silverton, 2800 m., Amer. bor. (Crypt. Form. Colo. 444). — Nomen propter perithecium lanatum.

## MERISMATIUM Zopf. — Syll. XVI p. 553.

1. Merismatium Lecanorae (Oliv.) Vouaux, Bull. Soc. Mycol. de Fr. 1913, 6727 p. 77. Polyblastia Lecanorae Oliv., Par. Lich. Fr. Suppl. p. 9.— Peritheciis sparsis, sed quandoque valde numerosis primum immersis

punctiformibus, demum  $^1/_3$  v. 0,5 emergentibus, nigris, ostiolo umbilicato praeditis, subsphaeroideis 200-300  $\mu$  diam.; contextu obscure brunneo, crasso, pseudoparenchymatico e cellulis polygoniis 7-10  $\mu$  lat. efformato; ascis clavatis, distincte crasseque pedicellatis, apice late rotundatis, crasse tunicatis, octosporis, quandoque tetrasporis, 110-124  $\times$  24-31; paraphysibus juventute tantum distinctis, sinuosis, irregulariter ramosis; sporidiis distichis v. monostichis, oblongis, quandoque ovoideis, plerumque vero valde irregularibus 5-7 distincte transverse septatis et 1-2 longitudinaliter septatis, septis spuriis nonnullis etiam praeditis, ad septa constrictulis flavo-melleis, 24-31  $\times$  11-14 (sec. Oliver, 25-40  $\times$  10-16).

Hab. in thallo ad apothecia Lecanorae parellae (Lichenes), Adge Herault, Gallia (A. DE CROZALS).

- **PYRENOPHORA** Fr. Syll. II p. 277, IX p. 895, XI p. 344, XIV p. 602, XVI p. 549, XVII p. 757, XXII p. 278.
- 1. Pyrenophora pileata Volkart ap. Rübel, in Engl. Bot. Jahrb. 47 6728 (1912) p. 516, fig. 18.— Peritheciis sparsis, epidermide ostiolo tantum prorumpentibus, ovoideis, 170-290  $\mu$  latis, 200-330  $\mu$  altis, ostiolo 100-130  $\mu$  lato setis brevibus numerosissimis cincto; ascis clavatis 104-148  $\approx$  21-30 (plerumque 122  $\approx$  25), apice rotundatis, paraphysibus filiformibus obvallatis; sporidiis octonis, distichis, luteis, fusiformibus, 38-50  $\approx$  10-14, transverse 5-septatis, longitudinaliter septo unico imperfecto praeditis.

Hab. in foliis putrescentibus Phyteumatis hemisphaerici (Campanulaceae), in Monte Bernina, Engad. super.

2. Pyrenophora convexispora Bubàk, Annales Naturh. Hofmus. Wien 6729 XXVIII (1914) p. 198. — Peritheciis sparsis, globosis, 100·150 μ diam., subepidermicis, dein apice conico prominulis, contextu crasso, pseudoparenchymatico, nigro, vertice setis fuscis, rigidis, septatis, 80·150 μ longis ornatis; ascis paucis, ellipsoideo-oblongis, 75-110 × 38·50, breviter pedicellatis, crasse tunicatis, octosporis; sporidiis 3-stichis, ovoideo-ellipsoideis, 28·48 × 17·24, transverse 5·7-longitudinaliter 2·3-septatis, ad septa valde constrictis ideoque loculis convexis, aureo-flavidis vel dilute castaneo-brunneis.

Hab. in foliis emortuis Arenariae Tmoleae (Caryophyllaceae), in monte Ak Dagh in Tauro cataonico, Kurdistania occid., alt. 2500-2650 m.

3. Pyrenophora Saponariae Gonz. Fragoso, Mem. R. Soc. Españ. Hist. 6730 Nat. t. 11., 1919, 3., p. 95.— Peritheciis numerosis, sparsis, erum-

pentibus, globosis, vel subglobosis, 175-300 µ in diam., saepe papillatis, atris, duris, pseudoparenchymaticis, cellulis 11-14 μ, vertice setulis rigidis curvulisve vestitis, longis usque 175 µ; ascis oblongis, rectis vel curvulis, 115-175 \* 28-32, apice rotundato-incrassatis, brevi pedicellatis, paraphysibus nullis vel evanescentibus; speridiis tristichis vel conglobatis, oblongis vel oblongo-fusoideis, utringue obtusis, rectis vel leniter curvulis, 45-60 × 15-24, plerumque transverse 7-septatis, setulis longitudinalibus, 1-3, ad septum vix constrictis, junioribus melleis, demum obscure fuscis.

Hab, in caulibus folisque siccis Saponariae caespitos a e DC. (Caryophyllaceae), prope Montsech d'Arés, Lérida (FONT QUER) et prope Torreblanca in Pyr., Aragon (C. PAU), Hispania.

4. Pyrenophora Silenes G. Fragoso, Pug. Myc. Persiae, Bol. Soc. Españ. 6731 de Hist. Nat. t. XVI, 1916, p. 172. - Peritheciis sparsis v. laxe gregariis, tectis, globosis breviter papillatis, atris subcoriaceis, distincte cellulosis, 100-200 u diam., ostiolo minuto pertusis, setis longis usque 90 × 5.7 septatis, fuligineis, in apicem saepe subhyalinis praeditis; ascis paucis, evanidis, usque ad 110 × 30, subsessilibus, apice rotundatis, paraphysibus ramosis intermixtis; sporis irregulariter distichis v. monostichis, brunneo-fuligineis, oblongis, 7-9-septatis, muriformibus, ad medium constrictis, plerumque 36- $42 \times 20-24$ , raro usque  $70 \times 28$ , transverse 7-11, longitudinaliter 3-5 septatis, ad septa omnia constrictis.

Hab. in foliis ramulisque languidis v. emortuis Silenes tejadensis et S. albescentis (Caryophyllaceae), prope Olhoas Rio Karun et Kouh-Sefid (Alto Karun), Persia (FERD. MARTINEZ DE LA ESCALERA). - Pyrenophorae dubiae Bub. proxima sed satis diversa.

5. Pyrenophora Leucelenes Ch. E. Fairman, Mycologia 10., 1918, p. 6732 249. - Peritheciis nigris minutis 100-150 µ diam., sparsis, immersis, dein erumpenti-superficialibus globosis, breviter minuteque setulosis, setulis basi brunneis apice hyalinis reetis rigidis 20-70 × 3-4; ascis obovatis apice rotundatis breviter stipitatis, octosporis. 80-85 × 30-33; sporidiis irregulariter tristichis v. conglobatis, 6-7septatis septo medio constrictis, superiori parte obtusis et episporio protrudenti, loculis septis long. 1-3 divisis, primum flavis dein obscure brunneis demumque opacis, 20 × 13,33.

Hab. in caulibus foliisque Leucelenes arenosae (Compositae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY). - Sociae adsunt Hendersonia Leuc. et Microdiplodia Leucelenes.

6. Pyrenophora dichromotricha Speg., Anal. Mus. Nac. Buenos Aires, 6733 XXVI p. 126 (1914) c. ic. - Peritheciis in matrice decorticata et cinerascente superficialibus, sparsis vel hinc inde laxe gregariis, udis subglobosis, siccis plus minusve collabescentibus, 200-250 µ diam., ostiolo minute papillato perforatis, membranaceis, atris, contextu indistincto subopaco, pilis simplicibus, patentiusculis, vix flexuosis, inferne atris superne achrois, 50-100 × 5-8, continuis vel parcissime septatis indutis; ascis cylindraceo-clavulatis, apice rotundatis crasseque tunicatis, basi breviter crasseque pedicellatis, 100 > 20, subaparaphysatis; sporidiis oblique distichis, ellipsoideis, utringue modice rotundatis, transverse 3-5-septatis, ad septum medium tantum validiuscule constrictis, loculis centralibus septis lon. gitudinalibus 1-2 divisis, primo flavidis dein atris subopacis, 24-28 \* 13-14.

Hab. in caulibus aridis subputrescentibus Euphorbiae terracinae (Euphorbiaceae), in dumis circa Puerto Luz, ins. Canar.

7. Pyrenophora Ephedrae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6734 Buenos Aires XXIII p. 63 (1912). - Peritheciis sparsis, per rimulas corticis erumpentibus, minutis, atris, 180-200 µ diam., carnosulo-submembranaceis, contextu dense minuteque parenchymatico, ostiolo non papillato sed fimbriato-penicillato, setis confertis, erectis, 30.60 × 5.6, fulvellis, obtusiusculis 3.5 blastibus; ascis e cylindraceo-subclavulatis, breviter pedicellatis, 125-150 × 20, parce paraphysatis; sporidiis distichis, elongato-ellipsoideis, rectis vel leniter inaequilateris, utrinque acute rotundatis, transverse 3-5-(raro 6.) septatis, medio tantum constrictis, septo longitudinali unico, primo flavis dein olivaceis, 28-30 \* 9-10.

Hab. in ramulis emortuis Ephedrae and in a e (Gneta. ceae), in praeruptis Potrerillos prope Mendoza, Argentina.

8. Pyrenophora Brizae C. Mass. in Saccardo, Ann. Mycol IX, 1911, 6735 p. 250. - Peritheciis erumpentibus laxe disseminatis, subcarbonaceis, globosis, ovoideis, 260-300 µ diam., superne setulis rigidis extremitate pallidioribus, septatis 200-220 × 6-10 coronatis; ascis breviter stipitatis, cylindraceo-clavulatis varie curvulis, 140-180 × 32-40; paraphysibus filiformibus cito collabefactis; sporidiis octonis, pallide flavis, melleis, oblongis, utrinque rotundato-obtusis, 3septatis, loculis duobus mediis v. superiore tantum longitudinaliter 1-septatis,  $26-32 \times 10-14$ .

Hab. in foliis emortuis Brizae mediae (Graminaceae),

in M. Baldo, loco « Val Fredda » dicto (A. Goiran). - Pyren. reli-· cinae valde affinis sed characteribus sporidiorum, ut videtur, satis diversa.

9. Pyrenophora Pellatii N. Ranoïevich, Ann. Univ. Grenoble 1918, livr. 6736 3., p. 375, fig. 3; Bull. Soc. Mycol. de Fr., XXXV, 1919, p. 16, fig. 3. — Peritheciis subaequaliter distributis, epidermide tectis, ostiolo setis convergentibus ornato, erumpentibus, piriformibus, globosis, basi fibrillosis, nigris, 165-280 µ diam., setis rigidis, fragilibus, dilute fuligineo-brunneis apice pallidioribus, continuis, demum septatis, tunica ca. 5 \mu erassa, usque ad 360 \mu longis, 8,5-14 \mu latis, contextu parenchymatico, fuligineo-brunneo; ascis oblongo-clavatis, cylindraceis, rectis, curvulis, supra rotundatis, basi breviter pedicellatis, tunica 3.5-4.5 µ crassa, octosporis, 98-119 × 28-35. Paraphysibus superantibus, numerosis, simplicibus, septatis, hyalinis, ea. 3 µ latis; sporidiis distichis, ovoideo-elongatis, oblongis, utrinque rotundatis, rectis vel leniter curvulis, transverse 7-septatis, initio medio, aetate ad septa omnia constrictis, longitudinaliter 2-4 septatis, primo melleis, demum obscure fuligineo-brunneis, 29-39 \* 11.17.

Hab. in spinis Astragali aristati (Leguminosae), prope Ubaye ad Jausiers, Basses-Alpes, La Grave, Villard-d'Arène, Hautes Alpes, Gallia (A. Pellat).

10. Pyrenophora dubia Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6737 (1914) p. 199. - Peritheciis sparsis, globosis vel parum applanatis, 200-300 µ diam., subepidermicis dein nudis, atris, nitidis, contextu crasso, pseudoparenchymatico, atro, setis rigidis, 180-280 μ longis, fragilibus, septatis, nigro-fuscis ornatis; ascis ovoideis vel oblongoclavatis, saepe curvatis, 150 × 65-75 (in peritheciis), apice rotundatis, basi breviter pedicellatis, tunica crassiuscula praeditis; sporidiis tristichis, ellipsoideo-oblongis, 45-80 × 25-36, transverse 7-11longitudinaliter 2-3-septatis, ad septa constrictis, castaneo-brunneis, strato mucoso hyalino crasso obvolutis.

Hab. in rhachidibus foliorum emortuorum Astragali icm a dophylli (Leguminosae), in monte Meleto, Tauro Armenio in Kurdistania media, alt. 2600-3100 m. - A P. pachyasca Syd. sporidiis majoribus, a P. Astragalorum Maire ascis latioribus octosporis differt.

11. Pyrenophora Meliloti N. Ranoïèvich, Ann. Univ. Grenoble, livr. 3., 6738 1918, p. 374, fig. 2; Bull. Soc. Mycol. de Fr., XXXV, 1919, p. 15, fig. 2. - Peritheciis gregariis, peridermide diu tectis, tandem erum-

pentibus, nigris, subglobosis, globoso-depressis, 130-245  $\mu$  diam., contextu parenchymatico, fuligineo-brunneis, setulis concoloribus, apicem versus dilutioribus, erectis, leniter curvulis, sursum attenuatis, usque ad 118  $\mu$  longis, 4-5,5  $\mu$  latis praeditis, ostiolo 20-30  $\mu$  lato; ascis oblongo-clavatis, cylindraceis, rectis, curvulis, supra rotundatis, stipitatis, octosporis, 64-90  $\times$  16-22, paraphysibus superantibus, septatis, hyalinis, ca. 3  $\mu$  crassis; sporidiis distichis, ellipsoideo-ovato-elongatis, utrinque rotundatis, primum transverse 5-septatis, septis imparibus (medio fortiter) constrictis, demum 7-septatis, ad omnia septa plus minusve constrictis, longitudinaliter 2-3 septatis, loculis ultimis plerumque continuis, flavo-melleis, dein fuscidulis, diaphanis, 22-30  $\times$  9,5-14,5.

Hab. in caulibus vetustis Meliloti albae (Leguminosae), prepe Ubaye ad Jausiers, Basses Alpes, Gallia.

12. Pyrenophora depressa Peck — Syll. IX, p. 895 — f. Thesii Gz. Fragoso, Bol. R. Soc. Españ. Hist. nat. t. 18., 1918, p. 82. — Peritheciis globosis vel globoso-depressis, primum tectis, dein erumpentibus, 180-350 μ diam., basi hyphis fuligineis cinctis, prope apicem setis rigidis, rectis vel flexuosis, crassiusculis praeditis; ascis clavatis, 95-125 × 30-40, breviter pedicellatis; sporidiis distichis, vel conglobatis, primum olivaceis, dein fuligineis, oblongis vel ovoideis, 28-36 × 11-18, plerumque 3-raro 5-septatis, medio constrictis, septis 1-2 longit. praeditis.

Hab. in caulibus siccis Thesii impressi (Santalaceae), prope Kouh-Sefid, Persia (FERD. MARTINEZ DE LA ESCALERA). — Affinis Pyr. depressae f. Stachydis Gz. Frag. cum qua verisimiliter species distincta constituit.—F. Stachydis G. Fragoso, Pug. Myc. Persiae, Bol. Soc. de Hist. Nat. t. XVI, 1916, p. 171.— Peritheciis sparsis, primum tectis dein erumpentibus, globoso-depressis, atris, usque 250  $\mu$  diam., basi hyphis radiantibus cinctis, prope apicem setis brevioribus, rigidis, crassiusculis praeditis; ascis clavatis vel cylin draceo-clavatis, usque 100-125  $\approx$  25-30; ascosporis irregulariter distichis vel monostichis, oblongis 3-5-septatis, longitudinaliter 1-2-septatis, 25-35  $\approx$  18-20, pallide-fuscis.

Hab. in spinis, caulibus ramulisque Stachydis acerosae (Labiatae) Boiss., prope Kouh-Sefid (Alto Karun) et Olhoas, Rio Karun, Persia (FERD. MARTINEZ DE LA ESCALERA).—Socia Pleospora kurdistanica Bubak et P. herbarum (Pers.) Rabh.

PLEOMASSARIA Speg. - Syll. II p. 239, IX p. 872, XI p. 341, XVI

p. 552, XVII p. 759, XXII p. 280.

1. Pleomassaria Elaeagni Potebnia, Publ. Ist. Bot. (Charkow 1912). - 6740 Descriptio ignota. Status conidicus sistit Camarosporium Elaeagni Poteb., Syll. Fung. XXII p. 1081.

Hab. in ramis siecis nec non in culturis Elaeagni angustifolia e (Elaeagnaceae), Saratov, Rossia.

2. Pleomassaria gigantea Sydow, Ann. Mycol. XII, 1914, p. 265. — 6741 Peritheciis sparsis, globosis vel hemisphaericis, coriaceo-carbonaceis, ca. 1 mm. diam., atris, tectis, cortice immersis, ostiolo rotundo donatis; ascis oblongis, 200-300 \* 35-40, 1-2-sporis; paraphysibus longissimis, copiosissimis, 1-1,5 µ latis; sporidiis oblongis vel oblongo-fusoideis, utrinque obtusis, transverse 18-30-septatis, ad omnia septa non vel leniter constrictis, longitudinaliter 3-5-septatis, hine clathrato-muriformibus, ex hyalino olivaceo-fuscis vel rufofuscis, 80-170 \* 25-28, muco haud observato.

Hab. in cortice Euphorbiae sp. (Euphorbiaceae), Amazimtote Natal, Africa austr. (E. M. DOIDGE).

3. Pleomassaria andina Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6742 Buenos Aires XXIII p. 64 (1912). - Peritheciis laxissime gregariis, primo tectis dein, cortice secedente, nudatis superficialibusque, subhemisphaericis, 300-350 µ diam., atris, carbonaceis, obsolete ostio. latis, contextu indistincto; ascis cylindraceis, breviter crasseque pedicellatis, 150-180 \* 16-18, paraphysibus copiosis cinctis 4-6-8sporis; sporidiis recte vel oblique monostichis, ellipsoideis, utrinque subacutiuscule rotundatis, transverse 5-9-, longitudinaliter 1-2septatis, 28-35 × 12-14, ad septum centrale tantum validiuscule constrictis, non vel leniter inaequilateris, primo flavis et muco obvolutis dein atris nudis.

Hab. in ramis Lycii chilensis (Solanaceae), in aridis circa Potrerillos prope Mendoza, Argentina.

TITANELLA Sydow, Ann. Mycol. 17., 1919, p. 36. - Perithecia glo . bosa vel subglobosa, atra, primitus fere omnino in peridermio immersa, dein plus minus erumpentia, tandem saepe pro maxima parte libera, sed peridermii reliquiis albidis conspersa, coriaceocarbonacea, parietibus crassis, ostiolo plano erumpente; asci clavati, copiose paraphysati, plerumque 2-4 spori; sporae magnae, brunneae, muriformiter divisae, muco plus minus distincto obvolutae.

Hue ducendae sunt, sec. Sydow: Julella luzonensis P. Henn., J. intermedia Syd., Pleomassaria ilicina Syd. et Butl., Pl. grandis Syd.

1. Titanella ilicina Syd. et Butl., Ann. Mycol. IX, 1911, p. 411 (sub 6743 Pleomassaria). - Peritheciis sparsis v. hinc inde aggregatis, depresso-globosis, coriaceo-carbonaceis, 3/4-11/4 mm. diam., atris, cortici exteriori immersis, tectis, ostiolo circulari erumpenti donatis; ascis amplis, variabilibus, 1-5-sporis; sporidiis oblongis v. oblongo-fusoideis, utrinque rotundatis, saepe inaequilateris, transverse 6-12-septatis, longitudinaliter 1-septatis, ad septa non vel vix constrictis, primo hyalino-flavidis, dein fusco-brunneis, opacis, 70-120 × 20-28, muco obvolutis.

Hab. in cortice Ilicis (verisimiliter I. dipyrenae), Aquifoliaceae), Ranikhet Kumaon Himalaya, Indiae or. (INAYAT).

2. Titanella grandis Sydow, Ann. Mycol. XII, 1914, p. 264 (sub Pleo. 6744 massaria). — Peritheciis sparsis, depresso-globosis, coriaceo-carbonaceis, 1,5-2,5 mm. diam., atris, in cortice exteriore immersis, vertice tantum prominulis, esticle retundo pre ratione minuto denatis, pariete crassissimo; ascis amplis, variabilibus, 2-8 sporis, indistincte paraphysatis, sporidiis monostichis usque distichis, ellivsoideo-oblongis, utrinque obtusis, transverse 10-15-septatis, longitudinaliter 2-4-septatis, non constrictis, raro ad septum medium lenissime constrictis, ex hyalino fuscis, 70-95 > 28 36, episporio crasso (2-3,5 μ), involucro mucilaginoso nidulantibus.

Hab. in cortice Sideroxyli inermis (Sapotaceae), Amanzimtote Natal, Africa austr. (E. M. Doidge).

3. Titanella intermedia Sydow, Engler' Botan. Jahrbüch. 54., 1916, 6745 p. 254 (sub Julella). — Peritheciis sparsis, depresso-globosis vel lenticularibus, coriaceo-carbonaceis, 1,5-3 mm. diam., duris, atris, in cortice exteriore immersis, vertice prominulis, ostiolo rotundo poro ratione minuto donatis, pariete crassissimo; ascis plerumque bisporis, paraphysatis; sporidiis monostichis usque oblique monostichis, oblongis, elongatis, utrinque obtusis, transverse 20-30-septatis, longitudinaliter 2-4-septatis, ex hyalino fuscis, 150-200 \* 25-32, episporio crasso, muco haud observato.

Hab. ad corticem arboris cujusdam, Malu, Nova Guinea nord-or., Africae (LEDERMANN).

TEICHOSPORA Fuck. — Syll. II p. 290, IX p. 899, XI p. 345, XIV p. 603, XVI p. 550, XVII p. 760, XXII p. 281.

1. Teichospora woronowiana Rehm, Monit. Jard. Bot. Tiflis XXV (1912) 6746 p. 13. — Peritheciis gregariis, primitus innatis dein denudatis et sessilibus, globulosis, poro pertusis, dein collabendo patellaribus,

300  $\mu$  diam., glaberrimis, atris, subcoriaceis; ascis cylindraceis, 4-8-sporis,  $120 \times 15$  circa, filiformi-paraphysatis; sporidiis monostichis, oblongo-ellipsoideis, utrinque obtusis, 3-septatis, ad septa vix constrictis, cellulis mediis semel longitudinaliter divisis, apud sporas in ascis tetrasporis etiam cellulis apicalibus, flavidulis,  $20 \times 10$ -11.

Hab. in caulibus siceis Kalidii caspici (Chenopodiaceae), in deserto ad pedem montis Mysov-dagh, prov. Baku in Caucaso (WORONOW).

2. Teichospora bakuana Rehm, Monit. Jard. Bot. Tiflis, XXV, (1912) 6747 p. 13. — Peritheciis gregariis in ligno denigrato insidentibus, primitus basi innatis, conoideis, crasse papillatis, poro perspicuo pertusis, atris, glabris, carbonaceis, 0,5 mm. latis; ascis cylindraceis 200 × 25, octosporis, paraphysibus filiformibus obvallatis; sporidis distichis, oblongis, utrinque obtusis, transverse 7- longitudinaliter 2-3-septatis, cinereo-flavidulis, ad medium vix constrictis, 25-30 × 10-14, quaque cellula 1-guttata.

Hab. in caulibus Salsolae gemmascentis (Chenopodiaceae), in monte Tekle-dagh, prov. Baku in Caucaso (Woronow).

3. Teichospora Chuquiragae (Speg.) Sacc., Strickeria Chuquiragae Speg. 6748
Mycet. Argent. VI, Anales Mus. Nac. Buenos Aires, XXIII, p. 65
(1912). — Peritheciis hinc inde 3-5 caespitosis, in ligno denudato cinerascente superficialibus, majusculis, udis globosis, 350-450 μ diam., siccis cupulato-collapsis et rugulosis, ostiolo fere inconspicuo, contextu coriacello indistincto, atro; ascis cylindraceo-clavatis, breviter pedicellatis, 125-175 × 18-20, paraphysibus filiformibus parce obvallatis, jodi ope nulla vel in juventute vix coerulescentibus, 4-8-sporis; sporidiis monostichis, ellipsoideis, utrinque subacutiu-scule rotundatis, typice transverse 7-septatis, longitudinaliter 1-2-septatis, ad septum medium leniter constrictis, olivaçeis, 30-35 × 12-15. — In eodem perithecio et saepe in eodem asco sporidia continua vel 1-3-septata quandoque occurrunt.

Hab. in caudicibus ramisque languidis Chuquiragae erinaceae (Compositae), in montanis circa Potrerillos, prope Mendoza: Argentina.

4. Teichospora rostrata Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6749 Buenos Aires, XXIII, p. 69 (1912).— Peritheciis primo tectis dein, cortice secesso, nudatis, plus minusve insculptis, hemisphaerico-conoideis, 250-300 μ diam., ostiolo longiusculo, cylindraceo, obtuso armatis, atris, carbonaceis; ascis cylindraceis, brevissime pedicel-

latis, 120-130 \* 14-18, paraphysibus longioribus dense obvallatis: sporidiis saepins oblique distichis, ellipsoideo-fusoideis, rectis vel leniter inaequilateris, plerumque acutiusculis, 5-9-(typice 9-) septatis, medio tantum validiuscule constrictis, septo longitudinali unico, olivaceis, 26-32 × 10.

Hab. in ramis truncisque languidis Chuquiragae erin a c e a e (Compositae), in montuosis circa Potrerillos, prope Mendoza, Argentina.

5. Teichospora pseudostromatica Rehm, Ann. Mycol. IX, 1911, p. 370. 6750 Peritheciis primitus plus minusve gregarie cortici denigratae innatis, interdum fere stromatice connatis, subhemisphaerice prominentibus, cortice demum delapsa in ligno superficialiter longe denigrato basi innatis, subsessilibus, late dispersis, globuloso-conoideis, in papillulam crassam obtusam elongatam, 0,5-1 mm. diam. et alt., nigris, excipulo crasso carbonaceo, hyphis perpaucis subfuscis extus obsessis; ascis cylindraceo-clavatis, apice rotundatis, -150 × 15, 4-8-sporis; sporis oblongo-ovoideis, utrinque obtusis, medio paullulum constrictis, transverse 7-, longitudinaliter 2-septatis flavo-fuscidulis, 25-30 \* 9-10, monostichis; paraphysibus filiformibus, 2 µ cr.

Hab. in ramulis Convolvuli fruticosi (Convolvulaceae), in arenosis prope Tschelkar Prov. Turgaj, Turkestan (AN-DROSSOW). - Pertinet ad typum: Teich. obducens (Fr.) Fuck. et Th. ignavis (De N.) Karst., juxta T. mammoides (E. et E.) Berl., diversa autem peritheciis multo majoribus longius papillatis, in ligno denigrato sessilibus.

6. Teichospora Alpataci Speg., Mycet. Argent. VI, Anal. Mus. Nacion. 6751 Buenos Aires, XXIII p. 65 (1912). - Peritheciis ligno denudato et cinerascente superficialibus, sparsis vel laxe gregariis globosis, 250-300 µ diam., saepe a latere compressis, ostiolo valide papillato coronatis, carbonaceis; ascis cylindraceis, breviter crassiusculeque pedicellatis, 120-200 × 20, apice jodi ope leniter coerulescentibus, 4-8-sporis, paraphysibus filiformibus parum longioribus crebiuscule obvallatis; sporidiis oblique monostichis, ellipsoideis, utrinque rotundatis, majusculis, 35 40 × 15-18, in eodem asco fabrica valde ludentibus, nunc continuis, nunc transverse 1-2-3-septatis (typice 3septatis), loculis 1 vel 2 centralibus plerumque longitudinaliter divisis, ad septa non constrictis, cribrose guttulatis, subopace fuligineis.

Hab. in candicibus vetustis cariosis Prosopidis alpataci

(Leguminosae), circa Potrerillos prope Mendoza, Argentina.

7. Teichospora? prosopidicola Speg., Mycet. Argent. VI, Anal. Mus. 6752 Nac. Buenos Aires, XXIII p. 68 (1912). — Peritheciis matrice sordide cinerascente innatis, primo cortice tectis dein erumpentibus, demum superficialibus, lenticularibus, 150-200 µ diam., udis molliusculis, siccis subcorneis, ostiolo impresso pertusis; ascis cylindraceis, basi breviter attenuato-pedicellatis, aparaphysatis, 110-120 \* 14-16, octosporis; sporidiis ellipsoideis vel lenissime obovatis, utrinque obtusiuscule rotundatis, transverse 3-septato-constrictis. loculis 1 vel 2 centralibus longitudinaliter divisis, primo pallide lutescentibus dein famoso-olivaceis, 18-20 v 10-12.

Hab. in ramis aridis Prosopidis alpataci (Leguminosae), in montuosis circa Potrerillos prope Mendoza, Argentina. -- Affinis T. Gilliesii Speg. sed peritheciis non carbonaceis et ascis semper aparaphysatis distincta.

8. Teichospora megalocarpa Rehm, Ascom. exsicc. fasc. 54 n. 2082, 6753 Ann. Mycol. XII, 1914, p. 166.— Peritheciis in ligno saepe atrato plerumque solitariis, interdum nonnullis concretis, sessilibus, ad basim innatis, globuloso-conoideis, minute papillulatis, atris, scabriusculis, subcarbonaceis, ca. 1 mm. diam., foveolam in ligno relinguentibus; ascis cylindraceis 150 \simes 18, octosporis; sporis ellipsoideis, utrinque rotundatis, transverse 7-longitudinaliter 3-septatis, non constrictis, fuscis, strato gelatinoso 3 μ cr. obductis, 30-35 \* 10-15, monostichis; paraphysibus filiformibus.

Hab. in ramis decorticatis Rhamni pumilae (Rhamnaceae), Halsalpe Alpium Salisburgensium Bavariae (C. ARNOLD). -Th. endophloeae Pass. et Th. megastegae E. et Ev. proxima sed colore et peritheciis magnis subcarbonaceis praecipue diversa.

9. Teichospora Pruni-americanae Rehm, Ann. Mycol. XIII, 1915, p. 5. - 6754 Perithecia gregaria, ligno extus denigrato putrescenti innata, dein emergentia, globuloso-conoidea, minute papillulata, glabra, atra, 0,4 mm. diam., membranacee fusce contexta, mox collabentia; asci cylindraceo-clavati, 100 \* 10-12, 8-spori; sporae ovoideae vel clavatae, transverse 3-septatae, medio valde constrictae, cellulis mediis, interdum etiam apicalibus semel longitudinaliter divisis, flavidulae, 15-16 \* 7, 1-stichae. Paraphyses filiformes.

Hab. ad lignum Pruni americanae (Rosaceae), Kuhn, N. Dak., America bor. (Brenckle).

10. Teichospora melanospora (Kirschst.) Sacc., Stricheria melanospora 6753 Kirschst. in Krypt. Fl. Brandenb. VII p. 269 (1911). - Peritheciis

gregariis, immersis, raro plus minusve emergentibus, sphaericis, ostiolo papillato vel breviter conoideo saepe nitente, 350-450 µ diam.; excipulo tenui, carbonaceo, granuloso, atro; ascis cylindraceis, sursum rotundatis, octosporis, 110-140 × 11-15, paraphysibus copiosis, filiformibus, ramosis, ascos superantibus; sporidiis monostichis, ellipsoideis vel ovatis, utrinque interdum modice attenuatis, saepius vero late rotundatis, 5-7 (plerumque 7-) septatis, medio plus minusve constrictis, septis longitudinalibus 1 vel 2 plerumque incompletis, 17-23 × 8-10, initio hyalinis olivaceo-griseis.

Hab. in parte interna corticis adhuc trunco adnatae Pruni Cerasi (Rosaceae), Grossbehnitz in Germania.

11. Teichospora capnodioides Arnaud, Ann. École Nat. Agric. Mont- 6756 pell. X, 1911, p. 323, icon. p. 237. - Peritheciis corticolis, minutissimis, 100-150 µ diam., globosis, nigro-nitidis, demum collapsis, in macula nigra insidentibus; ascis clavato-cylindraceis, 8-sporis, aparaphysatis; sporidiis clavato-cylindraceis, medio plus minusve constrictis, atro-brunneis, transverse 5-7-septatis, 30-34 \* 10-12, loculis septis 2 longitudinalibus divisis.

Hab. ad corticem emortuum Populi albae (Salicaceae) prope Montpellier, Galliae merid.

12. Teichospora trimorpha Atk. ap. Peck in N. Y. State Mus. Bull. 6757 157 (1911) p. 34 (1912). — Peritheciis sparsis vel gregariis, orbicularibus vel oblongis, raro 2-3 conjunctis, atris, cortice insculptis, ostiolo applanato vel breviter papillato praeditis; ascis dimorphis, cylindraceis vel clavatis, breviter pedicellatis, interdum collapsis, 4-6 vel 8-sporis; sporidiis monostichis, medio constrictis, 5-8-septatis, atro-brunneis, saepe inaequilateris, 20.30 × 7-10; paraphysibus copiosis.

Hab. in cortice ramulorum emort. Populi (Salicaceae), prope Ithaca in Amer. bor. - A T. disseminata B. et C. differt peritheciis valde majoribus.

13. Teichospora aberrans Rehm, Ann. Mycol. XIII, 1915, p. 5. - Pe- 6758 rithecia gregaria, innata, dein prorumpentia, conoidea, distincte papillulata, glabra, fusco-nigra, 0,5 mm. lata, non carbonacea; asci clavati, apice rotundati, 60-70 \* 12, 8-spori; sporae oblongae vel oblongo clavatae, primitus 3-septatae, dein 4-septatae, cellula inferiore 1-septata, ejusque, cellulis multo minoribus, una alterave cellula, plerumque tertia semel longitudinaliter divisa, ad septa vix constrictae, fusco-brunneae, 15-18 \* 6-7, distichae. Paraphyses filiformes.

Hab. ad ramulos Salicis (Salicaceae), Kulm, N. Dak., America bor. (Brenckle).

14. Teichospora loculosa E. Sous. da Camara, Myc. novi mycoflor. azor. 6 et afric., in Revista agronom., Lisboa 1920, Extr. p. 3, tab. II fig. 4-7. — Peritheciis primo immersis dein erumpentibus, sparsis gregariisve, globoso-conoideis, nigris, raro uni-locularibus, usque 3,5 mm. diam.; ostiolo rotundo brevique; ascis parum distinctis, oblongis subclaviformibusve, achrois, vix stipitatis, octosporis, 406-500 × 55-70; paraphysibus copiosissimis filiformibusque; sporidiis monostichis, oblongo-ellipsoideis, plus minus fuligineis, utrinque rotundatis, clathrato-reticulatis, septis transversis 5 distinctis interdum praeditis, 70-95 × 35-45.

Hab. in ramulis Theobromae Cacao L. (Sterculiaceae), Sancti Thomensis insula (Dr. Armando de Seabra).

PLEOSPHAERIA Speg. — Syll. II p. 304, IX p. 910, XI p. 347, XIV p. 606, XVII p. 763, XXII p. 286.

1. Pleosphaeria fibrincola Peyronel, in Mem. R. Acc. delle Scienze di Forino, Ser. II, tom. LXVI, 1916, p. 22 extr. — Hyphis mycelicis per ligni fibras decurrentibus, umbrinis, septatis, saepe in articulos sporulas Diplodiae curiose imitantes, 7-9 × 4-5 scissis nec non toruloides, 3-9 μ crassis; peritheciis minutissimis, 90-120 μ diam., gregariis, inter fibras nidulantibus et semimmersis, globosis, nigris; excipulo membranaceo, tenui, atro, pseudocellulis 5-7 μ latis constituto, setulis atris, continuis, acutis, 60-80 × 4-4,5 hispido; ascis parcis, aparaphysatis, clavato-obovatis vel late fusoideis, tunica apice valde incrassata, deorsum in pedicellum brevissimum attenuatis, 30-45 × 14-18 (p. spor.), octosporis vel etiam non raro esasporis; sporidiis confertis, laete viridi-olivaceis, ellipsoideis, transverse 5-, raro 3-4ε, longitudinaliter 1-, raro 2-irregulariter et incomplete septatis, ad septa din non vel vix, demum autem distincte constrictis, 12-18 × 6,5-9,5, plerumque 14-16 × 7-8,5.

Hab. in ligno decorticato Betulae albae (Betulaceae), Riclaretto (loco La Roccia dicto, 1200 m. alt.) in Vallibus Valdensibus Pedemontanis, Italia bor. — Obs. Auct.: Pleosphaeriae vagae (Rehm.) Berl. valde, ut videtur, affinis; a qua tamen peritheciis haud pilosis, sed eximie setulosis, sphaeroideis, etc., facile distinguitur.

2. Pleosphaeria Anchonii Bubak, Ann. Naturh. Hofmus. Wien, XXVIII 67 (1914) p. 196.—Peritheciis sparsis, globosis, basi applanatis, 350-

400  $\mu$  diam., atris, nitidulis, carbonaceis, contextu pseudoparenchymatico fuligineo-atro, setis usque ad 120  $\mu$  longis, pauciseptatis, subrectis vel torulosis, atro-brunneis, obtusiusculis ornatis; aseis oblongis, apice rotundatis basi in pedicellum attenuatis, crasse tunicatis,  $250 \times 55\text{-}65$ , paraphysibus filiformibus, ramosis, curvatis, hyalinis obvallatis; sporidiis distichis vel subdistichis, ovoideo-oblongis, utrinque rotundatis,  $48\text{-}62 \times 22\text{-}28$ , transverse 9 10-longitudinaliter 1-3-septatis, ad septa constrictulis, fuscis, muco obvolutis, dimidio superiore latiore.

Hab. in caulibus emortuis Anchonii Tourne fortii (Cruciferae), in monte Meleto Dagh, Taurus armenius, Kurdistania media.

3. Pleosphaeria Ilicis Arnaud, Ann. École nat. Agric. Montpellier, X, 6762 1911 p. 323, c. ic. p. 233. — Peritheciis hypophyllis, rarius ramulicolis, sparsis, minutis, 150-200 μ diam., globulosis, poro pertusis, inter pilos folii insidentibus; hyphis subramosis, septatis, fuscis inferne obsessis, parte superiore calvis; ascis clavato-cylindraceis, octosporis, copiose paraphysatis; sporidiis subdistichis, chlorino-brunneis, oblongo-clavatis, medio constrictis, transverse 3-septatis, 18-22 × 8-10, loculis septis 1-2 longitudinalibus v. obliquis divisis.

Hab. in foliis rarius ramulis Quercus Ilicis (Cupuliferae), in Gallia meridionali. — Paraphyses ex icone septatae.

4. Pleosphaeria astragalina Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6763 (1914) p. 196. — Peritheciis gregariis, globoso-depressis, 200-350 μ diam., ubique hyphis fuscis, torulosis, usque 150 × 6-8, septatis, apice rotundatis tectis, contextu coriaceo-carbonaceo, atro-fusco, intus dilutiore, medio poro pertusis; ascis oblongo-clavatis, rectis vel curvatis, apice angustato-rotundatis, basi in pedicellum brevem attenuatis, crasse tunicatis, octosporis, 90-120 × 15-20, paraphysibus filiformibus, apice ramosis obvallatis; sporidiis recte, rarius oblique submonostichis vel distichis, ellipsoideo-oblongis, typice 3-rarius 4-5-septatis, ad septum medium constrictulis, utrinque rotundatis, loculis 1-3 mediis longitudinaliter semel divisis, dimidia parte superiore majore, luteo-brunneis (mensurae desunt).

Hab. in rhachidibus foliorum Astragali Rauwolfii (Leguminosae), ad confines Mesopotamiae et Arabiae borealis.

5. Pleosphaeria subandina Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6764 Buenos Aires, XXIII p. 64 (1912).— Peritheciis in ligno denudato cinerascente superficialibus, sparsis, nigris, puberulis, udis lenticulari-hemisphaericis, 300-350 μ diam., siccis collapsis, minute pa-

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759

pillato-ostiolatis, coriaceo-carnosulis, contextu indistineto, opaco, atro, pilis flexuosulis simplicibus vel furcatis,  $25\text{-}100 \times 4\text{-}5$ ,  $1\text{-}3\text{-}cellularibus}$ , fuscis adspersis; ascis cylindraceis, breviter noduloseque pedicellatis,  $120\text{-}130 \times 12\text{-}14$ , aparaphysatis; sporidiis oblique monostichis, elliptico-subovatis, non vel vix inaequilateris, transverse 5-septato-constrictis, loculo uno alterove longitudinaliter diviso, olivaceis,  $20\text{-}22 \times 8\text{-}9$ .

Hab. in ramis dejectis subputrescentibus Hualaniae colletioidis (Polygalaceae), in saxosis Potrerillos prope Meudoza, Argentina.

6. Pleosphaeria Escalerae G. Fragoso, Pug. Myc. Persiae, Boll. Soc. 6765 Españ. de Hist. Nat. t. XVI, 1916, p. 170. — Peritheciis superficialibus numerosis gregariis, globoso-applanatis, poro pertusis, contextu atro-carbonaceo, 200-360 μ diam. vel oblongis 200-350 × 180-300, setis numerosis vestitis, rectis vel toruloideis, paucis septatis usque 250 × 5-7, brunneo-fuligineis, apice rotundatis; ascis oblongo-clavatis 90-110 × 15-28, in pedicello brevi attenuatis apice rotundatis vel angustatis, parietibus crassis, paraphysibus filiformibus ramosis obvallatis; ascosporis irregulariter distichis vel conglobatis, ellipsoideis vel oblongis utrinque rotundatis typice 3-septatis, rarius 2-septatis loculis mediis longitudinaliter 1-septatis, ad septum semper constrictis, loculis extremis saepe pallide fuligineis, mediis brunneo-fuligineis vel totis brunneo-fuligineis, 30-38 × 12-18.

Hab. in caulibus emortuis Bupleuri baldensis (Umbelliferae), Olhoas, Rio Karum, Persia (FERDIN. MARTINEZ DE LA ESCALERA).— A Pleosphaeria astragalinae Bubak cui affinis, differt ascosporis 2-3-septatis nunc 3-5-septatis.

## JULELLA H. Fab. - Syll. II p. 289, IX p. 899, XVI p. 550.

1. Julella plagiostoma Syd., Ann. Mycol. 15, 1917, p. 210. — Perithecia 6766 sparsa vel pauca gregaria, praecipue in corticis rimis evoluta tune que saepe seriatim disposita, conoidea, 500-800 μ diam., primitus plus minus profunde immersa, tandem parte dimidia superiore conoidea erumpentia et libera, atra, glabra, carbonacea, saepe oblique nascentia, ostiolo majusculo centrali vel saepe obliquo; asci magni, 1-2-spori (an semper?); sporae oblongo-ellipsoideae, utrinque saepe leniter attenuatae, sed apicibus rotundatis, horizontaliter 20-28 septatae, cellulis omnibus verticaliter pluries septatae, hinc dense clathratae, castaneo brunneae, tandem subatrae, 100-120 × 26-48, non constrictae.

Hab. in cortice indet., Biliran, Ins. Philipp. (R. C. Mc Gregor).

## PLEOPHRAGMIA Fuck. - Syll. II p. 307.

1. Pleophragmia pleospora W. Kirschst., Krypt. Fl. Brandenb. VII p. 6767 128 (1911). — Peritheciis immersis, sparsis vel gregariis, sphaeroideis, ostiolo breviter papillato praeditis, 500-600 μ diam., contextu atro, carbonaceo, fragili, pilis brunneis septatis ornato; ascis cylindraceis, breviter pedicellatis, apice rotundatis incrassatisque, crasse tunicatis, 8- raro 4-sporis, 160-240 × 24-30, paraphysibus filiformibus aequilongis obvallatis; sporidiis monostichis vel irregulariter distichis, oblongis (apice superiore obtuse acutatis) vel clavatis, plerumque inaequilateris, luteis dein brunneis, transverse 7-longitudinaliter 2-3-septatis, ad septa constrictulis, muco obvolutis, 30-40 × 10-15.

Hab. ad excrementa Capreoli, Rathenow, Germania.— Species notabilis, Pleosporae herbarum plurimis notis affinis.

CUCURBITARIA Gray. — Syll. II p. 307, IX p. 215, XI p. 348, XIV p. 607, XVII p. 764, XXII p. 288.

1. Cucurbitaria Agaves Syd. et Butl., Ann. Mycol. IX, 1911, p. 406.— 6768 Peritheciis amphigenis, gregariis, caespitose erumpentibus, interdum nonnullis confluentibus, saepissime etiam discretis, tectis, demum vertice erumpentibus, minutis, conico-globosis, ca. 200-250 μ diam., atris, rugulosis, globoso papillatis; ascis cylindraceis, paraphysatis, p. sp. 80-90 × 10, octosporis; sporidiis monostichis v. oblique monostichis, oblongis, utrinque rotundatis, obtusis, fuscis, 3-septatis, ad septa constrictis, loculo secundo interdum inflato et plerumque extra ascos septulo longitudinali diviso, saepe in articulos biloculares secedentibus, 13-15 × 4-6.

Hab. in foliis Agaves sp. (Amaryllidaceae), Dehra Dun, Indiae or. (E. J. BUTLER). — Socia Diplodia Agaves Niessl.

2. Cucurbitaria moravica Rehm, Ann. Mycol. X, 1912, p. 393. — Pe-6769 ritheciis stromatice collectis, 5-20 arcte congregatis, stromati nigro orbiculari insidentibus in caespitibus orbicularibus 1-5 mm. diam. per corticem laciniatim adhaerentem prorumpentibus, sphaeroideis, mox apice depresso-umbilicatis, ostiolo perparvulo papillato, extus valde rugoso-scabris, nigro-fuscis, 0,2-0,4 mm. diam.; ascis cylindraceis 110-120 × 10-12, octosporis; sporis fusiformibus, medio constrictis, utrinque acutatis, transverse 3-5-septatis, cellulis, excl. apicalibus, semel longitudinaliter divisis, fuscidulis, 18-20 × 7-8,

monostichis; paraphysibus filiformibus.

Hab. ad ramos adhuc pendulos, siccos Alni glutinos a e (Betulaceae), prope Hrabnoka Moraviae, (Peteak). — Affinis Cuc. conglobatae (Fr.) Ces. et De N.

3. Cucurbitaria transcaspica Rehm, Ann. Mycol. X, 1912, p. 395. -- 6770 Peritheciis saepe 5-10, plerumque 2-6-nggregatis, raro solitariis, sub peridermio innatis, dein prorumpentibus et in ligno interdum fuscato sessilibus, ovoideo-globosis, atris, glabris, papillula minutissima perspicua, sieca apice umbilicata, coriacea, excipulo crasso, extus fusco, 0,25-0,35 mm.; ascis cylindraceis, crasse tunicatis, 120-125 × 15-20, octosporis, saepe modo 3-sporis evolutis; sporis monostichis, oblongis, utrinque obtusis, medio constrictis, transverse 3-septatis, cellulis mediis semel longitudinaliter divisis, flavis, dein subfuscis, 24 30 × 12-15; paraphysibus filiformibus, septatis, 3-4 μ cr.

Hab. in caulibus siccis S a l s o l a e s u b a p h y l l a e (Chenopodiaceae), prope Pagum Usch-Adji, Transcaspia (Androssow).

— Var. Atraphaxidis Rehm, Ascom. Exsicc. fasc. 50 n. 1997, Ann. Mycol. X, 1912, p. 357.— Peritheciis plane speciei; ascis cylindraceis, -130 × 10-12, octosporis; sporis monostichis subfuscis, medio subconstrictis, oblongis utrinque rotundatis, triseptatis, cellulis mediis semel longitudinaliter divisis, 20 × 8-9.

Hab. in caulibus Atraphaxidis spinosae (Polygonaceae), prope Kara-Tschokat prov. Turgaj, Turkestania (ANDROSSOW).

4. Cucurbitaria Acanthophylli Bubàk, Annal. Naturh. Hofmus. Wien, 6771 XXVIII (1914) p. 196.— Peritheciis 1-2 vel paucis stromate nigro, tenui, extus nigro, carbonaceo, intus pseudoparenchymatico, flavofusco immersis, basi nudis, globosis, 400-600 μ diam., superficialibus, breve papillatis, contextu flavo-fusco; ascis cylindraceis, apice rotundato-attenuatis, basi breviter pedicellatis, octosporis, 200-250 × 20, paraphysibus filiformibus, apice ramosis et arcuatis obvallatis; sporidiis monostichis, oblongis vel fusoideis, utrinque attenuatis saepeque fere acutatis, vel rotundato-attenuatis, 38-43 × 13-15, transverse 7- rarissime 9-septatis, medio fortiter constrictis, fuscis, muco destitutis, loculis nonnullis (usque ad 6) longitudinaliter septis mediis 1-2 divisis.

Hab. in caulibus A c a n thophylli verticillati (Compositae), in districto Mamuretül.— Asis in Kurdistania occid., alt. 650 m., socia Hendersonia Acanthophylli Bub.

5. Cucurbitaria Castaneae Sacc. - Syll. II p. 316. - Var. Querous-llicis 677

Saccardo et Trotter, I Funghi dell'Avellinese, Avellino 1920, p. 88.— Sporidiis paullo majoribus, 22-25 \* 10-12.

Hab. in ramis emortuis Quercus Ilicis (Cupuliferae), in montibus supra Taurano Avellino, Italiae merid. (TROTTER).

6. Cucurbitaria kurdica Bubàk, Ann. Naturh. Hofmus. Wien, XXVIII 6773 (1914) p. 197. — Peritheciis in caespites plus minusve rotundatos densissime coacervatis, stromate crasso insidentibus, globosis, 400-600 μ diam., mutua pressione valde difformibus, apice papilla minuta ornatis, ibidem in siccum parum concavis, rugulosis, atris, carbonaceis, contextu pseudoparenchymatico atro-fusco; ascis cylindricis, rectis vel interdum curvulis, basi breviter pedicellatis, apice rotundatis, octosporis, 180-200 × 15-17, paraphysibus creberrimis, filiformibus, hyalinis obvallatis, sporidiis 1-stichis, fusoideis, utrinque acutiusculis, 28-44 × 9-14, typice 5-rarius 6-7-septatis, medio parum constrictis, loculis 1-5 mediis longitudinaliter 1-septatis, fuligineis, loculis apicalibus dilutioribus.

Hab. in caulibus delapsis putridis Astragali kurdici (Leguminosae), in Tauro Cataonico, Kurdistania occid., alt. 2000 m. — Affinis C. Astragali Karst. et Har. sed omnibus partibus major.

7. Cucurbitaria Halimodendri Rehm, Annal., Mycol. IX, 1911, p. 370; 6774 Tranzsch., Myc. Ross. n. 173 (1911). — Peritheciis in stromate distincte evoluto orbicularibus, c. 2-3 mm. latis, rarius oblongo vel lineari, nigro, caespitose -30 arcte congregatis, innatis, per rimas epidermidis prorumpentibus, globosis, atris, minutissime papillatis, subasperulis, 0,3-0,5 mm. diam., poro apicali plerumque albo conspicuo parenchymatice fusce contextis, glabris; ascis cylindraceis, c. 130 × 10-14, octosporis; sporis ellipsoideis v. obovatis, medio septato-contractis, utraque parte transverse primitus semel, dein biseptatis, longitudinaliter semel divisis, flavis, 20-22 × 10-12, monostichis, senilibus viridi-fuscis, -15 μ latis, fere orbicularibus; paraphysibus filiformibus, apice conglutinatis, hyalinis.

Hab. ad caules Halimodendri argentei (Leguminosae), Celkar, Tschelkar, prov. Turgaj Turkestan (Androssow). — Proxima C. crotonoides (Pass.) Berl. ascis clavatis, sporis 2-seriatis differre videtur et plane diverso hospite.

8. Cucurbitaria Ceanothi Dearness et House, N. York St. Mus. Bull. 6775 n. 188, p. 29 (1916). — Peritheciis ruvidis, parvis, subcaespitosis; stromate corticali nigro demum e cuticula erumpenti; ascis paraphysatis, 150-175 × 10-15; sporidiis usque oblique monostichis, 3-7

sed plerumque 5-6 septatis,  $20-26 \times 11-12$ , septo medio parum constrictis.

Hab. in ramis emortuis Ceanothi americani (Rhamnaceae), Albany, Amer. bor. (H. D. House).

9. Cucurbitaria Pruni-spinosae Rehm, Ascom. exsice. fasc. 52, n. 2045. — 6776
Peritheciis in stromate nigro subcorticali late effuso v. solitariis
v. 8-10 congregatis, sessilibus, atris, ovoideis vix papillulatis, subcoriaceis, corticem plerumque transversim perrumpentibus, 0,15 mm.
latis, demum apice umbilicatis; ascis cylindraceis, 100·120 × 12,
octosporis; sporis ellipsoideo oblongis, utrinque rotundatis, transverse 3-septatis, medio constrictis, una alterave media cellula semel longitudinaliter divisis, subfuscis, 18-20 × 8·9, monostichis; paraphysibus filiformibus.

Hab. ad ramulos siccos Pruni spinosa e (Rosaceae), prope Welka Moraviae (F. Petrak). — Cucurb. conglobatae (Fr.) Ces. et De N. proxima.

10. Cucurbitaria praeandicola Speg., Myc. Argent. VI, Anal. Mus. Nac. 6777 Buenos Aires XXIII p. 71 (1912). — Peritheciis dense constipatis, per corticis rimas erumpentibus, subglobosis, 200-250 μ diam., e mutua pressione saepe angulosis, levibus, atris, opacis, minute ostiolatis, udis molliusculis, siccis subsclerotiaceis, contextu indistincto atro; ascis cylindraceis, breviter pedicellatis, 150-180 × 15-20, paraphysibus vix longioribus densiuscule obvallatis; sporidiis recte vel oblique monostichis, subellipsoideis, 5-septatis, ad septa tria primaria validiuscule constrictis, subopace fuligineis, 25-30 × 12-14, loculis centralibus obscurioribus et septo longitudinali divisis.

Hab. ad ramos emortuos Verbenae asperae (Verbenaceae), in dumetis Potrerillos prope Mendoza, Argentina.

## Sect. 10. Scolecosporae

ACERBIA Sacc. — Syll. XI p. 353, XIV p. 619, XVII p. 768, XXII p. 290.

1. Acerbia Ephedrae Rehm in Jaap, Ann. Mycol. 14., 1916, p. 15. — 6778 Peritheciis gregariis in cortice immutato nidulantibus, globosis, postremo fere superficialibus, ostiolo vix visibili praeditis, 250 μ diam., membranaceis, glabris; contextu parenchymatico griseo-brunneo; ascis cylindraceis, 200 × 9 10, octosporis; sporidiis bacillaribus, parallele dispositis, hyalinis, jam in asco in loculos innume-

ros, subinde 2-5-connexos,  $3 \times 2-3$ , dilabentibus.

Hab. in ramis emortuis Ephedrae campylopodae (Gnetaceae), prov. Lesina Dalmatiae. - Acerbiae Sambuci (Pass.) Berl. affinis.

2. Acerbia donacina Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. 6779 Botany VI (1914) p. 2264. - Peritheciis gregariis, innatis, concideis, minutissime papillulatis, atro-nitentibus, crasse parenchymatice contextis, 0,5-0,8 mm. latis; ascis cylindraceo-fusiformibus, 100-120 \* 9, octosporis, non paraphysatis, sporidiis filiformibus. utringue acutatis, hand septatis, hyalinis, 50-60 \$ 2, vermiculariter parallele convolutis.

Hab. in Donace cannaeforme (Graminaceae), Los Baños, ins. Philipp. (C. F. BAKER).

3. Acerbia Maydis Rehm, Ascom. Philipp. VIII, in Leaflt. of Philip- 6780 pin. Bot. VIII, 1916, p. 2953. - Perithecia gregaria innata, conoidea, papillula minutissime prominentia, nigra, glabra, 0,2 mm. lata, parenchymatice contexta; ascis cylindraceis, 100 × 10-12, 3sporis. Sporae bacillares, rectae, 15-septatae dilute flavidulae, 70 ≥ 3, parallele positae. Paraphyses filiformes.

Hab. ad culmos emortuos Zeae maydis (Graminaceae), Los Baños. Ins. Philipp. (M. B. RAIMUNDO). — Acerbiae culmigenae Penz. et Sacc. affinis, sed perithecis, ascis sporisque eguttulatis minoribus diversa.

- LULWORTHIA Sutherl., Trans. Br. Mycol. Soc. V (1916) p. 259. Perithecia primo immersa postremo libera, majuscula, globosa, sine ostiolo evidenti. Asci clavati vel fusiformes, raro cylindracei, parietibus tenuibus, octospori, aparaphysati. Sporidia longissima, curvata, hyalina, continua, apicibus brevibus et hyalinis.
- 1. Lulworthia fucicola Sutherl, loc. cit. p. 259, t. V f. 4-7. Perithe-6781 ciis sparsis vel ternis quaternisve eodem loco crescentibus, primo immersis postremo partim liberis, in superiore parte carbonaceis contextu denso, in parte inferiore contextu laxiore, hyalino, molli, globosis vel leniter applanatis, sine ostiolo evidenti, 350-450 µ diam.; ascis crebris, clavatis vel fusiformibus, octosporis, parietibus tenuibus, aparaphysatis, 90-120 × 15-20; sporidiis longissimis, utrinque leniter attenuatis, curvatis, hyalinis, continuis, 70-100 > 4,5-5,5, apicibus brevibus hyalinisque.

Hab. in thallo vivo Fuci vesciculosi (Algae), Dorset, Britannia.

- LINOBOLUS Syd., Ann. Mycol. 15., 1917, p. 204.— Perithecia mycelio superficiali insidentia, globosa, obtuse papillata, coriacea vel carbonaceo-coriacea, parenchymatice contexta; asci cylindraceo-clavati, aparaphysati; sporidia filiformia, hyalina. Genus forte nimis affine Lulworthiae Sutherl.
- 1. Linobolus Ramusii Syd., l. c. Mycelium hypophyllum, subvelutinum, atro-brunneum, caespites minutas 1-3 mm. diam. formans ex hyphis copiosissimis flexnosis simplicibus vel raro parce ramosis, 150·250 μ longis, 2,5·3,5 μ latis, flavo-brunneis usque brunneis septatis (articulis 10-15 μ longis) compositum; perithecia mycelio superficialiter insidentia, saepe fere abscondita, globulosa, 150·250 μ diam. obtuse papillata, atra, contextu omnino opaco ut videtur irregulariter parenchymatico; asci cylindraceo-clavati, subsessiles, 120·150 ≈ 13·20, octospori, aparaphysati; sporae parallele positae, ascorum fere longitudine, 2,5·4 μ crassae, guttulatae, multiseptatae (articulis 8·12 μ longis) hyalinae.

Hab. in foliis Calami sp. (Palmae), Samar, Ins. Philipp. (M. RAMOS).

- CRISEROSPHAERIA Speg. Myc. Argent. VI, Anal. Mus. Nac. Buenos Aires, XXIII, p. 72 (1912).— Perithecia erumpentia, globosa, completa, superne ostiolis pluribus rotundis perforata. Asci cylindracei, aparaphysati, octospori. Sporidia filiformia hyalina.
- 1. Criserosphaeria phyllostictoides Speg., loc. cit., c. ic. Maculis can-6783 didis, amphigenis, e circularibus repandis, 3-8 mm. diam., linea callosa tenuissima cinctis; peritheciis epiphyllis, primo epidermide tectis dein erumpentibus, minutis, lenticularibus, 200-250 μ diam., membranaceis glabris, olivaceis, contextu tenuissimo, subprosenchymatico, radiante, fumoso-chlorino, ostiolis 5-20 rotundis perforatis; ascis cylindraceis, apice attenuatis, basi sensim angustato-pedicellatis, 110-120 × 5-6; sporidiis fasciculatis, filiformibus, rectis vel flexuosulis, utrinque attenuato-acutatis, 80-85 × 1, jodi ope nulla.

Hab. in foliis vivis Tromsdorfiae Hasslerianae (Amarantaceae), in dumetis prope Bompland, Misiones, Argentina.

- CEUTHOCARPON Karst. Syll. II p. 157, XIV p. 618, XVI p. 557, XXII p. 289.
- 1. Ceuthocarpon Talaumae Rehm, Ascom. Philipp., in Leaflt. of Phi- 678 lipp. Bot. VIII, 1916, p. 2953. Perithecia maculis primitus or-

bicularibus, dein late explanatis exaridis, albido-brunneis. -3 cm. latis longisque, interdum tenuiter nigre cinctis, in epiphyllo innata, gregaria, atra, glabra poro minutissimo pertusa, globulosa vel suboblonga 0,2 mm. diam. membranacea, ascis cylindraceis, 70-80 × 4, 8sporis. Sporae filiformes, rectae, continuae, hyalinae, 50 \* 1, parallele positae. Paraphyses plurimae filiformes 2 µ circiter er.

Hab. folia emortua Talaumae villarianae (Magnoliaceae), Los Baños Ins. Philipp. (M. B. RAIMUNDO). - Proximum Ceuth. depokense Penz. et Sacc., imprimis paraphysium defectu alienum.

2. Ceuthocharpon punctiforme Sacc., Notae Myc. XX, Nuovo Gioru. bot. 6785 it. 23., 1916, p. 203. — Peritheciis late gregariis, amphigenis sed in epiphyllo plenius evolutis, punctiformibus, globoso-lenticularibus, prominulis, epidermide velatis, atro-nitidulis, subastomis, erostribus, 125-140 µ diam.; contextu distincte parenchymatico fuligineo; ascis fasciculatis, cylindraceis, subsessilibus, apice obtusulis, 75-80 × 6, aparaphysatis, octosporis; sporidiis fasciculatis, filiformibus, leniter curvis utrinque obtusulis, minute multiguttulatis, 60-65 × 2,3-2,5, hyalinis.

Hab, in foliis arescendo aequaliter pallescentibus, Sterculia e sp. (Stesculiaceae), Los Baños, Ins. Philipp. — Habitus Sphaerellae punctiformis. Clypeus epidermicus perithecium vix excedens et cum eo concretus; hine stirps est potius Sphaerella scolecospora.

LINOSPORA Fuck. — Syll. II p. 354, IX p. 935, XI p. 352, XIV p. 618, XVII p. 775.

1. Linospora Trichostigmae F. L. Stevens, Bot. Gazette 70., 1920, p. 6786 399, fig. 2. — Maculis indefinitis 5-10 mm. diam., peritheciis dense aggregatis, sphaeroideis, 150-200 × 250, clypeo distincto tectis et zonula angusta (30-100 μ) pallida limitatis, ostiolo forma variabili praeditis, clypeo nigro, plerumque epiphyllo raro hypophyllo; ascis cylindraceis crasse tunicatis, 90-112 × 10-14; paraphysibus tenuibus filiformibus; sporidiis linearibus septatis pallide flavis. - Conidiis unilocularibus, hyalinis, utrinque acutatis magnitudine variabilibus plerumque 21-24 × 7, quandoque usque 48 μ long., quandoque etiam multo minoribus, in cavitatibus a peritheciis non distinctis ortis.

Hab. in folis Trichostigmatis octandrae (Compositae), Guayanilla, Porto Rico, America centr.

2. Linospora Sacchari Averna Sacca, Bol. Agric. Sao Paulo, 17., 1916, 6787 p. 614, fig. 228. - Peritheciis globosis immersis, collo cylindrico prominentibus parietibus tenuibus praeditis, 297.407 × 440-462; ascis

cylindraceis apice rotundatis ima basi abrupte in pedicellum brevem attenuatis octosporis,  $108-148 \times 8,1$ ; sporidiis filiformibus, continuis, hyalinis,  $108-121 \times 3$ .

Hab. in caulibus Sacchari officinarum (Graminaceae), in Brasilia et valde noxia.

3. Linospora pulchella Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue-6788 nos Aires XXIII, p. 71 (1912) cum ic.— Peritheciis obsolete subseriatis, matrici immutata immersis, globosis, parvis, 150 μ diam., ostiolo papillato carbonaceo vix exserto coronatis, molliusculis, atris, contextu indistincto; ascis e clavato subfusoideis, saepe curvulis, sessilibus, 90-100 × 12-14; sporidiis fasciculatis, filiformibus, utrinque attenuato acutatis, 80 × 4, leniter curvulis, grosse pluriguttulatis, hyalinis.

Hab. in culmis aridis Graminaceae cujusdam (? Phalaris) in pratis prope Paranà, Entre Rios, Argentina.

**OPHIOBOLUS** Riess. — Syll. II p. 337, IX p. 923, XI p. 351, XIV p. 614, XVI p. 557, XVII p. 769, XXII p. 308, 1506.

1. Ophiobolus Laminariae Sutherland, Trans. Brit. Myc. Soc. V, pt. I, 6789 1914, p. 147, tab. 3 fig. 1-4 (1915). — Peritheciis dense confertis, semper immersis, ostiolo valde elongato, cylindraceo, apice tantum erumpente, subsphaeroideis vel complanatis, magnis, 350-450 μ diam., contextu coriaceo atro; ascis cylindraceis curvatis, octosporis, 300-360 × 20-25,5, aparaphysatis; sporidiis filiformibus ascos subaequantibus, hyalinis, 50-75-septatis, tandem in articulis cylindraceis 5-6 × 5,5-6,5 seissis.

Hab. in thallo putrescente Laminariae digitatae (Algae), Orkney, Scotia.

2. Ophiobolus Anonae Rangel, Bol. Agr. Sao Paulo 1915, p. 315 tab. V 6790 fig. 4-7. — Peritheciis amphigenis, sparsis vel gregariis, immersis vel erumpentibus, sphaeroideis, apice in collum longiusculum, crassum (50-70 × 55-80), conoideum, poro pertusum desinentibus, contextu celluloso, pallide olivaceis, 160-180 μ diam.; ascis clavato-cylindraceis, octosporis, 70-80 × 8-10; paraphysibus filiformibus; sporidis vermiformibus, 1-septatis, leniter incurvatis pallidis, brunneis, 60-70 × 2-3.

Hab. in foliis vivis Anonae reticulatae (Anonaceae), Mimoso, St. Espirito-Santo, Brasiliae.

3. Ophiobolus Butleri Syd., Ann. Mycol. 14. 1916, p. 260. — Perithe 6791 ciis sparsis vel laxe aequaliter gregariis, minutis, 150-230 µ diam.,

immersis, atris, conico-sphaeroideis, ostiolo minutissimo tantum per epidermidem leniter elevatam prorumpentibus; ascis cylindraceis, sessilibus,  $50.80 \times 7.10$ , octosporis; sporidiis filiformibus, tennissimis,  $50.70 \times 1$ , pluriguttulatis vel spurie pluriseptatis, hyalinis (etiam intra ascos).

Hab. in caulibus Capparidis spec. (Capparidaceae), Pusa Indiae or. (BUTLER).

Ophiobolus Gnaphalii (Sacc. et Bres.) C. E. Fairman, Ann. Mycol. IX, 6792
 1911, p. 149.— Ophiob. vulgaris Sacc. var. Gnaphalii Sacc. et Bres., Sacc. Syll. IX p. 924.— Var. lanaria C. E. Fairman, l. c. — A typo differt pycnidiis foliicolis vix papillatis, ascis fusoideis utrinque attenuatis, longestipitatis, aparaphysatis, 125-165 × 6-7; sporidiis nec septatis nec guttulatis, plerumque 115-125 × 2-3.

Hab. in pag. inf. foliorum Antennariae plantaginifoliae (Compositae), Ridgeway N. Y., Oak Orchard Creek road, Lake Shore road, Yates, N. Y., non longe a Lacu Ontario, prope Lyndonville N. Y., Amer. bor.

5. Ophiobolus Manihotis Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 6793 p. 410. — Peritheciis sparsis, minutis, 150-300 μ diam., immersis, conico-sphaeroideis, epidermidem elevantibus, atris, ostiolo minutissimo tantum erumpentibus; ascis cylindraceis v. cylindraceo-clavatis, sessilibus v. brevissime stipitatis, parce paraphysatis, 50-90 × 5-10, octosporis; sporidiis filiformibus, tenuissimis, 45-70 × 1-1,5, obscure plurilocularibus, in asci lumine flavido-brunneolis.

Hab. in petiolis Manihotis utilissimae (Euphorbiaceae), Pulliyanur Travancore, Indiae or. (E. J. BUTLER).

of Sci., VIII (1913) p. 272. — Peritheciis aggregatis vel saepius bene seriatis, matrice inflatula diu omnino tectis, e mutua pressione irregularibus, atris, 300-450 μ diam., glabris, levibus, ostiolo matricem inflatulam vix punctiformi-perforante; ascis cylindraceo-clavatis, brevissime stipitatis, apice rotundatis vel leniter attenuatis, 90-110 × 8-13, octosporis; sporidiis elongato-fusoideis, utrinque attenuatis, continuis sed pluriguttulatis, hyalinis, 55-75 × 3-4.

Hab. in culmo emortuo B a m b u s a e (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Habitu O. javanici Penz. et Sacc. similis, sed ascis sporidiisque valde longioribus.

7. Ophicholus graffianus Sacc., Ann. Mycol. XII, 1914, p. 305. — Pe- 6795 ritheciis subsparsis, innato-erumpentibus, nigricantibus, longiuscule

papillatis, sed non rostratis, 250-300  $\mu$  diam., contextu celluloso fuligineo; ascis cylindraceis, apice rotundatis deorsum sensim tenuatis, breviterque stipitatis, 95-100  $\approx$  9-10, filiformi-paraphysatis, octosporis; sporidiis bacillaribus leviter curvis v. rectis, 80-90  $\approx$  2,5-2,7, minute denseque multiguttulatis, flaveolis, utrinque obtusulis, non nodosis.

Hab. in caryopside subputrescente Coicis Lacrimae (Graminaceae), Manila, Ins. Philippin. (P. W. GRAFF).

8. Ophioholus oryzinus Sacc., Notae Mycol. XX, Nuovo Giorn. bot. 6796 it. 23., 1916, p. 203.— Peritheciis laxe gregariis, subcutaneis, dein vertice erumpentibus et ostiolo plus minus prominulo emergentibus, globosis, 300-350 μ diam.; contextu laxe celluloso ochraceo, apicem versus sensim densiore et saturatiore, circa ostiolum rufescente; ascis cylindraceis apice rotundatis, brevissime tenuato-stipitatis, 95-110 × 7-11, filiformi-paraphysatis, octosporis; sporidiis fasciculatis, filiformibus, 86-100 × 3-4, minute multiguttulatis dilutissime chlorinis.

Hab. in culmis crassioribus, putrescentibus Oryzae sativa e (Graminaceae), Los Baños, Ins. Philipp.

9. Ophiobolus Panici Syd., Ann. Mycol. 14. 1916, p. 361. — Perithe- 6797 ciis laxe gregariis, globulosis, atris, 200-300 μ diam., tectis, ostiolo conico tantum erumpentibus, glabris, contextu parenchymatico obscure olivaceo ex cellulis, 7-10 μ diam. composito; ascis fasciculatis, cylindraceis, basi breviter stipitatis, 70-110 × 8-10, octosporis; paraphysibus copiosis, hyalinis, 1,5-2 μ crassis; sporidiis filiformibus, pluriguttulatis vel spurie 8-12-septatis, ascorum longitudine; 1,5-2 μ crassis, hyalinis, in cumulo flavis.

Hab. in vaginis emortuis Panici miliacei (Graminaceae), Los Baños, ins. Philipp. (C. F. BAKER).

10. Ophiobolus Cajani Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 6798 p. 409. — Peritheciis gregariis, sphaeroideis, minutis, 150-250  $\mu$  diam., immersis, atris, ostiolo breviter cylindraceo tantum erumpentibus; ascis cylindraceo-clavatis, 60-90  $\times$  8-11, octosporis, longissime paraphysatis; sporidiis filiformibus, spurie septatis, in ascis lumine flavo-brunneolis, 50-80  $\times$  2-2,5.

Hab. in caulibus emortuis Cajani indici (Leguminosae), Pusa Indiae or. (E. J. BUTLER).

11. Ophiobolus Caballeroi Gz. Frag., Fungi Horti Matrit. (1917) p. 20.— 6799 Peritheciis sparsis v. gregariis, nigris, immersis, globosis, usque ad 300 μ diam., ostiolo acuto, conoideo, crassiusculo, emergenti;

ascis cylindraceis, stipitatis, 70 × 7-8, octosporis, copiose filiformiparaphysatis; sporidiis filiformibus, flexuosis, obsolete pluriguttulatis v. septulatis, hyalinis, 50 \* 2.

Hab. in ramulis emortuis Sarothamni scoparii (Leguminosae), in Horto bot. Madrid, Hispaniae. - Ab Ophiob. Sarothamni recedit ascis, sporidiisque minoribus etc.

12. Ophiobolus Aspiciliae (Oliv.) Vouaux, Bull. Soc. Mycol. de Fr. 1913, 6800 p. 104, Bacidia Aspiciliae Oliv. Par. Lich. Fr. Suppl. p. 6. - Peritheciis sparsis, omnino immersis, apice ostiolo simplici apertis; subsphaeroideis, nigris, 145-205 µ diam.; contextu brunneo-olivaceo, tenui, pseudoparenchymatico e cellulis polygoniis irregularibus 5-8 µ er. efformato; ascis fusoideis, basim versus parum inflatis, utrinque obtuse attenuatis, tenuiter tunicatis, octosporis, 80-107 \* 12-16; paraphysibus simplicibus v. basi ramosis, septatis, versus apicem sensim attenuatis, multiguttulatis, ascos subaequantibus, basi 2 µ cr.; sporidiis aciculari-vermiformibus spiraliter laxeque dispositis, sursum attenuatis, utrinque obtusis, hyalinis, 3-5-septatoconstrictulis, arcuatis v. S-formibus, multiguttulatis, 60-78 × 3.5.

Hab. in thallo Aspiciliae gibbosae et caesioe i n e r e a e (Lichenes), Mons, Hèrault, Gallia (A. DE CROZALS).

13. Ophiobolus maquilingianus Sacc., Notae Myc. XXIII p. 68 (Accad. 6801 Veneto-trent. 1917). - Peritheciis laxe gregariis v. subsparsis, minutis, nigris, subcutaneo-erumpentibus, globulosis, membranaceis, 250-300 µ diam., ostiolo breviusculo (?) sed faciliter labente; ascis tereti-fusoideis, breviter stipitatis, apice obtuse tenuatis, 140-150 \* 12-14, octosporis; paraphysibus non observatis; sporidiis subtristichis, anguste fusoideo-filiformibus, 80-90 × 4-5, sub 5-septatis, non constrictis, hyalinis.

Hab. in rhachidibus emortuis Demonoropis (Palmae), M. Maguiling, Ins. Philipp.

14. Ophiobolus Licualae Sydow, Philipp. Journ. of Sc., v. 9., Sect. C, 6802 n. 2, 1914, p. 165. - Peritheciis sub epidermide bullatim elevata dense aggregatis, greges 0,5-5 mm. latos et longos formantibus, haud immersis sed epidermide tandem ab papillulis minutis perforata tectis, e basi lata obtuse conoideis, 130-160  $\mu$  latis, 60-125  $\mu$ crassis, atris, ad basim hyphis paucis circumdatis, contextu obscure fusco parenchymatico ex cellulis 6-8 µ diam. composito; ascis fasciculatis, cylindraceis, subsessilibus, filiformiter paraphysatis, 90-120 µ longis, 10-12 μ latis; sporidiis parallelis, filiformibus, rectis v. leniter curvatis, 2-4 septatis, guttulatis, hyalinis, 70-85 μ longis, 2,5 μ latis.

Hab. in foliis (petiolis) emortuis Licualae spinosae (Palmae), Palawan Lake Manguao, Ins. Philipp. (MERRILL).

15. Ophiobolus nigromaculatus Rehm, Ann. Mycol. X, 1912, p. 393. 6803 (Plejobolus). — Peritheciis in caule late denigrato innatis, demum emergentibus, peridermio tectis, dispersis, singularibus, interdum binis arcte congregatis, globosis, glabris, 0,3-0,8 mm. diam., ostiolo conoideo truncato, crasso, poro perspicue pertuso, prominente, pseudoparenchymatice fusce contextis; ascis cylindraceis, usque 300 × 12, octosporis; sporis parallele positis, utrinque obtusis, hyalinis, filiformibus, rectis, pluriseptatis, cellulis 5-7 μ longis, ad septa haud constrictis, mox in articulos usque 30 μ long. secedentibus, ca. 200 × 2,5-3; paraphysibus filiformibus, 2 μ crassis.

Hab. ad caules exsiccatos A c o n i t i N a p e l l i (Ranunculaceae), Funtensee prope Berchtesgaden 1800 m. alt., alpium bav. (ADE). — Oph. leptosphaerioidis Sacc. et Paoli affinis.

16. Ophiobolus Coffeae Patouillard, Bull. Soc. Mycol. de Fr., XXXIV, 6804 1918, p. 90. — Peritheciis hypophyllis, epidermide lacerata limitatis, sphaeroideis, nigris, glabris, subcoriaceis, 250 μ diam., apice pertusis, parietibus tenuibus brunneis subparenchymaticis donatis; ascis cylindraceis breviter stipitatis, 75-90 × 10-12, melleis, octosporis; paraphysibus copiosis, linearibus, septatis, 3-4 μ cr., submucosis; sporidiis linearibus, rectis v. curvis multiguttulatis, 75-85 × 2-4, viridi-rubescentibus.

Hab. in foliis Coffeae (Rubiaceae), ab Hemileia vast. vexatis, in Ins. Madagascar (Viguier).

17. Ophiobolus incomptus (Car. et De Not.) Sace. — Syll. II, 353. — 6805 Teste el. J. Vleugel (in Svensk Bot. Tidskr. V, 1911, p. 332, fig. 2) diagnosis ita completanda. — Peritheciis in caespitulis verruciformibus erumpentibus et peridermio lacerato cinctis 10-20 collectis, globosis, <sup>3</sup>/<sub>4</sub> mm. diam., atris, ostiolo distincte papillato praeditis, subiculo filamentoso immersis vel pilis brunneis, septatis, 4·5 μ crassis, sparsis obsitis, excipulo coriaceo-membranaceo, minute celluloso; ascis copiosis, cylindraceis, breviter pedicellatis, octosporis, 120-150 × 10-13, paraphysibus filiformibus obvallatis; sporidiis filiformibus, parallele fasciculatis, 11-20-septatis, ad septa leniter constrictis, subbyalinis, loculo uno alterove mediano nodoso-incrassato, 104-120 × 4.

Hab. quoque in ramulis siccis Ribis nigri culti (Saxifragaceae), Umea, Succia. — Habitus fere stromaticus, Melogramma in mentem revocans, sed stroma proprium nullum.

18. Ophiobolus oedistoma Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6806 Buenos Aires XXIII p. 73 (1912) c. ic. — Peritheciis sparsis, peridermio innatis, primo cortice tectis et tantum ostiolis exsertis manifestis, depressis, atris, 200 μ diam., ostiolo erecto, crasso, subtoruloso, carbonaceo, 0,5-1 mm. alto, 100-130 μ crasso coronatis, serius in ligno denudato superficialibus, membranaceis, contextu parenchymatico parum distincto, olivaceo; ascis cylindraceis, apice truncato-subbilobatis, bifoveolatis, basi in pedicellum sensim attenuatis, 150 × 8 p. sp., aparaphysatis, pedicello 50 × 1-2; sporidis fasciculatis, filiformibus, utrinque acutatis, continuis, eguttulatis, chlorinis, 140-150 × 1-1,5.

Hab. in caulibus emortuis putrescentibus Boehmeriae candidissimae (Urticaceae), in cultis, La Plata, Argentina.

19. Ophiobolus? paraënsis P. Henn., Hedw. vol. 48. (1908) p. 108. — 6807 Peritheciis erumpenti-superficialibus, gregariis, ovoideis, atro-sub-carbonaceis, fragilibus, rugulosis, conico-ostiolatis, 200-250 μ diam.; ascis longe clavatis, obtusis, basi attenuatis, octosporis, paraphysatis, 140-180 × 8-13; sporidiis filiformibus, pluriguttulatis, ca. 60 × 5, hyalinis,.... immaturis.

Hab. in truncis decorticatis Caricae Papayae (Caricaceae), et Heckeriae peltatae (Piperaceae), hort. bot. Goeldi, Parà (BAKER).

20. Ophiobolus cantareirensis P. Henn., Hedw. vol. 48. (1908) p. 10.— 6808 Peritheciis sparsis vel aggregatis, innato-superficialibus, conoideo-ovoideis, obtuse ostiolatis, atris, circa 0,3-0,4 mm. diam.; ascis cylindraceo - clavatis, apice obtuse rotundatis, tunicatis, octosporis,  $100\text{-}120 \times 10\text{-}15$ ; paraphysibus copiosis, hyalinis, 2  $\mu$  circ. crassis; sporidiis parallele stipatis, bacillaribus, guttulatis dein pluriseptatis, hyalino-fuscidulis,  $40\text{-}60 \times 4\text{-}5$ .

Hab. in ligno putrido, Serra da Cantareira, S. Paulo, Brasilia.

### LEPTOSPORELLA Penz. et Sacc. Syll. XIV p. 619, XVI p. 558.

1. Leptosporella andina Speg., Mycet. Argent. VI, Anal. Mus. Mac. 6809 Buenos Aires XXIII p. 74 (1912). — Peritheciis sparsis vel laxe gregariis, cortice immutato basi insculptis, hemisphaerico-prominulis, 200-250 μ diam., atris, rugulosis, coriacellis, contextu indistincto; ascis elongato-ellipsoideis, breviter pedicellatis, 100 × 15-18, paraphysibus filiformibus, crassiusculis, parum longioribus obvallatis, jodi ope nulla; sporidiis cylindraceo-subfusoideis, 2-3-stichis, rectis vel saepius curvulis, 3-septatis, non constrictis, hyalinis, 40-55 × 5-6,

loculis minute biguttulatis.

Hab. in caudicibus ramisque languidis Ephedrae and in ae (Gnetaceae), in montuosis Potrerillos, prope Mendoza, Argentina.

- MERINGOSPHAERIA Peyronel, Nuovo Giorn. Bot. it. 25., 1918, p. 415 (Etym. mérinx seta et sphaira sphaera, quia perithecia subglobosa, setulosa). Perithecia superficialia, sphaeroidea, carbonacea, setosa. Asci ellipsoidei v. clavato-ellipsoidei, pedicellati, octospori; sporidia elongato fusoidea, continua.
- 1. Meringosphaeria Patellula Peyronel, l. c., fig. 7-11, 12-14.— Hyphis 6810 mycelicis parcis fuligineis, ramosis, septatis, 2-4 diam.; peritheciis sparsis v. laxe gregariis, primum globosis v. subglobosis, mox collabescentibus et quasi pezizoideis, patelliformibus, 350-400 μ diam., excipulo carbonaceo membranoso, pseudoparenchymatico donatis setisque rigidis subuliformibus, basi inflatulis nigro-fuligineis, opacis, 60-250 × 4,5-10, undique vestitis; ascis tenuissimis, facile evanidis, fusoideo-ellipsoideis, inaequilateris, longe pedicellatis, octosporis, parte sporifera 28-34 × 4-5; sporidiis longe et anguste fusoideis, plerumque leniter curvatis, continuis, hyalinis, fasciculatis, 26-(29)-31 × 1-1,5.

Hab. in ramis truncisque marcescentibus corticatis et semidecorticatis Alni viridis (Betulaceae), Riclaretto loco dicto Lu Bric di Plan, 1700 m. alt. in vallibus Valdensibus Pedemontii, Italia bor.

#### Sphaeriacea omnino dubia:

SPHAERIA CINNABERINA O. G. Costa, Descrizione di talune Critto-6811 game osservate nel Regno di Napoli, in « Il Giambattista Vico », vol. I, Napoli 1857 (pp. 33-38) p. 34, tab. I fig. 1, A, B, C.— Epiphylla, simplex; sphaerulis sessilibus, minutis, subrotundis, inaequalibus, sparsis, colore cinnaberino, in macula albida inaequali insidentibus.

Hab. in foliis Salicis Russellianae (Salicaceae) au-

tumni initio, Neapoli.

# Fam. 3. Ceratostomataceae

### Sect. 1. Hyalosporae

CERATOSTOMELLA Sacc.— Syll. I p. 408, IX p. 573, XI p. 289, XIV p. 515, XVII p. 592, XXII p. 293.

1. Ceratostomella similis W. Kirschst., Krypt. Fl. Brandenb. VII p. 6812 245 (1911). — Peritheciis initio omnino immersis et tantum rostro cylindraceo, longo, nodoso, recto vel curvulo emergentibus, dein plus minusve nudatis, deuse gregariis, sphaeroideis, 350-450 μ diam., excipulo atro, coriaceo, levi; ascis cylindraceo-clavatis vel ellipsoideis, longe pedicellatis, 80-95 (p. sp. 45-60) × 8-10, paraphysibus tenuibus diffluentibus intermixtis; sporidiis distichis, cylindraceis vel subclavatis, utrinque rotundatis, biguttulatis vel non, hyalinis, 9-12 × 3-4.

Hab. in ligno corrupto Quereus (Cupuliferae), Rathenow in Germania. — Affinis C. strictae sed majore et peritheciis initio omnino insculptis. Mycelium substratum olivaceo-brunneo tingens.

2. Ceratostomella coprogena Massee, Bull. Bot. Gard. Kew 1913, p. 6813 105. — Peritheciis minutis, e conoideo subglobosis, atris, glabris, membranaceis, 200  $\mu$  diam., ostiolo elongato-acutato, contextu parenchymatico; ascis cylindraceo-clavatis, apice obtuse truncatis, octosporis; sporidiis ellipsoideis, hyalinis,  $7 \times 4.5$ .

Hab. in fimo animalium in horto botan. Singapore (BURKILL).— Affinis C. leiocarpae sed sporidiis minoribus et habitatione peculiari distincta.

GNOMONIELLA Sacc.— Syll. I p. 413, IX p. 575, XI p. 289, XXII p. 298.

1. Gnomoniella Alnobetulae Volkart ap. Rübel, Engl. Bot. Jahrb. 47. 6814 (1912) p. 517, fig. 19.—Peritheciis in macula foliorum circumscripta gregatim insidentibus, 260-240  $\mu$  diam., rostro brevi praeditis; ascis clavatis, tetrasporis, p. sp. 48-64  $\times$  9-15, pedicello usque ad 28  $\mu$  longo; sporidiis quaternis, submonostichis, reniformibus, hyalinis,  $15\text{-}18 \times 6\text{-}10$ .

Hab. in foliis putrescentibus Alni viridis (Betulaceae), in Alpibus Rhaetiae Primae (Bernina).

2. Gnomoniella kriegeriana Rehm, Ann. Mycol. XIII, 1915, p. 2. — 6815 Perithecia gregaria, innata, sphaeroidea, rostro conoideo brevi epidermidem perforantia, nigra, glabra, excipulo parenchymatice contexto, fusco, glabro, 0,15  $\mu$  diam.; asci elongato-fusiformes, -80  $\times$  8, 8-spori; sporae fusiformes, utrinque acutatae, rectae, 1-cellulares, guttatae, hyalinae, 15-18  $\times$  4, distichae; paraphyses filiformes, pancae.

Hab. ad petiolos putridos Geranii palustris (Geraniaceae), prope Königstein Saxoniae (KRIEGER).

3. Gnomoniella asparagina Rehm, Ann. Mycol. X, 1912, p. 390.— Per fitheciis plerumque gregariis, epidermide immutata tectis, globulosis, ostiolo subconico brevi prorumpentibus, parenchymatice contextis, glabris, c. 250 μ diam.; ascis cylindraceis, tenuibus, octosporis, circ. 50 × 4; sporis oblongis, rectis, 1-cellularibus, utrinque gutta oleosa majori praeditis, nec constrictis nec septatis, hyalinis, 7-8 × 2,5, monostichis; paraphysibus nullis.

Hab. ad caules putridos Asparagi officinalis (Liliaceae), Königstein a. Elbe Saxonia (KRIEGER).

4. Gnomoniella Veronicae Naoumoff, Champ. Oural. I (1915) p. 22 t. 1 680 f. 7.— Peritheciis solitariis, subepidermicis, nigris, sphaericis, 250 μ diam., in ostiolum rostellatum rectum, perithecium aequans tenuatis; ascis aparaphysatis, pedicellatis, fusoideo-clavatis, octosporis, 66-74 × 13-16 (pedicello 22 × 2) obtusiusculis, poro distincto praeditis, apice incrassato; sporidiis distichis, irregulariter ovoideis, inaequilateris, granulatis, 11-13,8 × 5,5-6,9, hyalinis.

Hab. in fructibus Veronicae Chamaedryos (Scrophulariaceae), Perm, Ural, Rossia.

## MAMIANIA De Not. - Syll. I p. 419, XIV p. 20.

Mamiania Ostryae (P. Henn.) Theiss. et Syd., Ann. Mycol. 13., 1915 6818
 p. 570, Phyllachora? Ostryae P. Henn. in Engl. bot. Jahrb. XXIX, 1900, p. 151 (ex err. Ph. Ostreae). — Fungus immaturus et tunc species ulterius inquirenda sed minime Dothideaceus. Verisimiliter affinis Mam. fimbriatae.

Hab. in foliis Ostryae japonicae (Betulaceae), prov. Iwaki, Japonia.

# Sect. 2. Phaeosporae

CHAETOCERATOSTOMA Turconi et Maffei, Atti Ist. Bot. Pavia XV p. 144 (extr. 1912) -- Etym. chaete, seta et Ceratostoma. -- Perithecia typice setosa, superficialia, subcarbonacea, atra, rostello

longo cylindraceo praedita. Asci ellipsoidei vel oblongi, subsessiles, aparaphysati, octospori. Sporidia plerumque globoso-cuboidea, continua, fusea.

1. Chaetoceratostoma hispidum Ture. et Maffei, loc. cit., tab. 15 fig. 1-3.— 6819 Peritheciis superficialibus, sparsis vel subgregariis, globulosis, 200-250 μ diam., subcarbonaceis, atris, setulis copiosis, rigidis, 350-500 μ longis, continuis, apice obtuse acuminatis, pallide fuscis vestitis, in rostellum praelongum (1-1,5 mm.) cylindraceum, erectum, quandoque leniter incurvum, apice plus minusve fimbriatum productis; contextu perithecii parenchymatico, rostri prosenchymatico; ascis obovatis, subsessilibus, mox evanidis, aparaphysatis, 35-45 × 16-20, octosporis; sporidiis distichis vel subdistichis, cuboideis, angulis obtusis, brunneis, 8-10 μ diam.

Hab. in foliis emortuis C a s t a n e a e v e s c a e (Fagaceae), prope Varazze, Liguria, It. bor.

### Sect. 3. Hyalodidymae

**LENTOMITA** Niessl. — Syll. I p. 584, IX p. 698, XIV p. 542, XVII p. 663, XXII p. 300.

1. Lentomita hirsutula Bresadola, Ann. Mycol. 18., 1920, p. 55.— Peritheciis sparsis, liberis, ovoideis, plus minusve longe rostratis, membranaceis, inferne villosulis, glabrescentibus, 300-350  $\mu$  latis, 400  $\mu$  altis, ostiolo conico vel cylindraceo, tereti, levi, non sulcato, usque ad 0,5 mm. longo; sporidiis ellipticis, hyalinis, octonis, monostichis, biguttatis, 1-septatis, ad septum non constrictis, 7-8  $\pm$  4; ascis cylindraceis, vix stipitatis, 56-60  $\pm$  6-7; paraphysibus non inventis; pilis fuscis, septatis, 4  $\mu$  crassis.

Hab. ad ligna Alni glutinosae (Betulaceae), Lusitaniae Setubal (TORREND).

Obs. Auctoris.— « Species haec forte cum *Ceratostomella rostrata* var. *levirostris* confluit, at, cum specimina hujus varietatis videre non licuerit et diagnosis a nobis data cum notis Autorum non concordat, ceu novam clare haud supervacaneum existimavi saltem pro futura historia familiae *Ceratostomacearum* ».

2. Lentomita philippinensis Rehm, Ascomyc. Philipp. VI, Leaflets of 6821 Philipp. Botany VI (1914) p. 2259. — Peritheciis gregariis, ligno extus nigrificato innatis, globulosis, glabris, nigris, 0,4 mm. diam., rostro cylindraceo 0,5 mm. longo per corticem prorumpentibus et prominentibus, membranaceis; ascis fusiformibus, octosporis, 50 × 8,

paraphysibus filiformibus intermixtis; sporidiis distichis, fusoideis, medio septatis, non constrictis, hyalinis,  $8-10 \approx 3$ .

Hab. in ramulo emortuo Gliricidia e sepium (Leguminosae), Los Baños, ins. Philipp. (C. F. BAKER). — Affinis L. longirostri Ath.

- CHAETOLENTOMITA Maublanc, Bol. Agr. Sao Paulo, 1915 p. 313. —
  Perithecia lignicola, superficialia, nigra, pilis rigidis vestita, et in
  rostrum attenuata; asci octospori, cylindracei; sporidia didyma,
  hyalina.
- 1. Chaetolentomita lignorum Maublane, l. e. Lignicola. Peritheciis globosis, superficialibus vel basi insculptis, nigris, circa 0,5 mm. diam., undique pilis rigidis, radiantibus, atrobrunneis (2-3 mm.) ornatis, sursum in collum elongatum, rectum, undulatum vel curvatum, glabrum, usque ad 1 mm. longum desinentibus. Ascis cylindraceis, breviter pedicellatis, 55-80 × 6-8, aparaphysatis. Sporidiis monostichis vel rarius subdistichis, oblongis, utrinque attenuato-obtusis, saepius inaequilateralibus gibbosisque, septo unico in cellulis duabus inaequalibus divisis, non constrictis, minute guttulatis, subhyalinis, 8-12 × 3-5.

Hab. in ligno putrido, Rio de Janeiro, Brasilia.

GNOMONIA Ces. et De Not. — Syll. I p. 561, IX p. 672, XI p. 302 XVI p. 483, XVII p. 664, XXII p. 300.

1. Gnomonia setacea (Pers.) Ces. et De Not. — Syll. I p. 563 — fm. 6823 Alni Vleugel in Svensk Bot. Tidskr. V (1911) p. 330. — Ascis maturis usque ad 57 × 13, junioribus 23-31 × 5-10, in pedicellum ad 9 μ longum attenuatis; sporidiis utrinque acutiusculis, guttulatis, saepe spurie septatis, 10-13 × 1,5-2, maturis bicellularibus, 4-guttulatis, usque ad 4 μ crassis. Status conidicus verisimiliter Gloeosporium suecicum Bubàk et Vleugel.

Hab. in foliis emortuis Alni incanae var. borealis (Betulaceae), Umea, Suecia.

2. Gnomonia betulina J. Vleugel, Svensk Bot. Tidskr., 11., 1917, p. 6824 304. — Syn. Gnomonia campylostyla Awd. — Syll. I p. 567 — f. Odoratae Vleugel in l. c. V, 1911, p. 344. — Peritheciis in maculis nigricantibus hypophyllis; ascis longe pedicellatis, cylindraceo-clavatis, 47-60 × 10; sporis hyalinis indistincte 1-septatis, rectis, in medio non constrictis, utrinque attenuatis et appendicibus minutis, filiformibus ornatis, 21-23 × 4. — Forma conidiophora consistit Gloeo-

sporium Betulae (Lib.) Mont.: Maculis epiphyllis, raro amphigenis, olivaceis, irregularibus, confluentibus, saepe per totam paginam effusis; acervulis atris, applanatis, subnitidis, gregariis; conidiophoris  $8.5 \cdot 10 \times 3.5$ , sursum attenuatis; conidiis hyalinis, continuis,  $9 \cdot 13 \times 2 \cdot 2.5$ .

Hab. in foliis anni praeteriti Betulae odoratae (Betulaceae), Lulea provinciae Västerbotten Sueciae (J. VLEUGEL).

3. Gnomonia euphorbiacea Sacc. et Br.—Syll. IX p. 672.— Var. Wul-6825 fenii Rehm in Jaap, Ann. Mycol. 14., 1916, p. 17.— A typo differt peritheciis in ligno nidulantibus.

Hab. in caulibus vetustis Euphorbiae Wulfenii (Euphorbiaceae), pr. Ragusa, Dalmatiae. — Cfr. Rehm, Ann. Mycol. IX. 1911, p. 288.

4. Gnomonia Iliau Lyon, Rep. Exper. Stat. Hawaiian Sugar Plant. Assoc., Path. and Phys. Bull. n. 11 (1912) p. 32, c. ic.; Edgerton in Zeitsehr. Pflzkr. 1916 p. 225. — Peritheciis 325-480 × 240-340, rostro 350-550 μ longo; ascis clavatis, tenuiter tunicatis, 60-80 × 8-14; sporidiis hyalinis, bilocularibus, 22-30 × 5-7.

Hab. in folis vaginisque Sacchari officinarum (Graminaceae), morbum « iliau » dictum generans, in ins. Hawaii et in Louisiana, Amer. bor.— Status conidicus sistit Melanconium Iliau.— De hac specie et de morbo in Saccharo cnfr. C. W. Edgerton, in Phytopathology, III, 1913, p. 93.

5. Gnomonia Caryae Fr. A. Wolf, Ann. Mycol, X, 1912, p. 491.— Peritheciis endophyllis, plus minusve gregariis, globosis v. compressoglobosis, 200-300  $\mu$  lat., collo crasso cylindrico, longe exerto, 300-400  $\approx$  35, saepe curvulo, in pagina inferiore raro in pagina superiore, epidermidem leniter elevatam perforantibus; ascis aparaphysatis, octosporis, obovatis, 60-65  $\approx$  15; sporidiis hyalinis, guttulatis, medio 1-septatis, vix vel leniter constrictis, 25-33  $\approx$  5.

Hab. in foliis dejectis Caryae ovatae (Juglandaceae), Unit. St., America bor. — Status conidicus sistit Gloeosporium Caryae Ell. et Dearn., G. Caryae E. et E., ? Discosia rugulosa B. et C.

6. Gnomonia Litseae Sydow, Ann. Mycol. XII, 1914, p. 200. — Macallis primo orbicularibus ca. 1 cm. diam. dein vagis irregularibus et confluentibus plura cm. longis et latis, in epiphyllo brunneis in hypophyllo cinereo-brunneis; peritheciis hypophyllis, parenchymate innatis, sparsis, subsphaeroideis, membranaceis, 160-180 μ diam., brunneis, rostro stricto cylindraceo rigido obtuso 250-350 μ alto, 25-32 μ lato, atro, epidermidem perforantibus, contextu parenchy-

matico ex cellulis 10-14  $\mu$  diam. composito; ascis subfusiformibus, tenuissimis et tenuissime stipatis, plerumque 4-6 sporis et 24-30  $\times$  9-10, raro 8-sporis et tunc usque 35  $\mu$  longis et 14  $\mu$  latis; sporidiis subdistichis, fusoideis, minute guttulatis, medio 1-septatis, non constrictis, hyalinis, 10-13  $\times$  2, utroque apice appendienta hyalina filiformia, 3-4  $\mu$  longa auctis.

Hab. in foliis vivis Litseae glutinosae (Lauraceae), Los Baños ins. Philippin. (S. A. REYES).

#### REHMIELLA Wint. — Syll. IX p. 675.

1. Rehmiella ulmicola Miyake, Bot. Mag. Tokyo, XXVIII (1914) p. 42, 6829 tab. 1 fig. 6-7. — Maculis luteo-brunneis, in centro pallidioribus, circularibus, 1 cm. circ. diam.; peritheciis epiphyllis, in centro macularum sitis, transverse ellipsoideis, parenchymate immersis, in ostiolum adsurgentem, epidermide perforantem lateraliter productis, atris, pseudoparenchymaticis,  $320\text{-}370 \times 120\text{-}180$ , ostiolo intus periphysibus vestito,  $160\text{-}200~\mu$  longo  $100\text{-}140~\mu$  lato; ascis paraphysibus immixtis, muco immersis, longe cylindraceis, apice rotundatis, facile disrumpentibus,  $140\text{-}160 \times 20\text{-}25$ , polysporis; sporidiis copiosis, pleramque subdistichis sed non raro irregulariter dispositis, fusoideis vel ovatis, hyalinis, nitentibus, prope basim 1-septatis, loculis maxime inaequalibus,  $12\text{-}15 \times 6.8$ .

Hab. in foliis Ulmi sp. (Ulmaceae), in China.— An novi generis typum?

## Sect. 4. Phaeodidymae

RHYNCHOSTOMA Karst. — Syll. I p. 730, 1X p. 750, XI p. 317, XIV p. 559, XVII p. 689, XXII p. 303.

1. Rhynchostoma sanguineo-airum Rehm, Ascomyc. Philipp. IV, Leafelsof Philipp. Botany, VI (1913) p. 1938. — Peritheciis in cortice denigrato sessilibus, arcte confertis, piriformibus, interdum elongato-compressis, primitus fere sanguineis, glabris, mox fuscidulis, senilibus atratis, subverruculosis, 0,7-0,9 mm. latis et altis, rostro conoideo, ad apicem acutato, recto, 0,8 mm. longo, ab initio nigro obsessis, excipulo carbonaceo crasso; ascis subclavatis, octosporis, 80 × 15; paraphysibus dissolutis; sporidiis distichis, ellipsoideis, rarissime curvatulis, medio septatis, non constrictis, utraque cellula 1-2-guttata, subfuscis, 18-20 × 7. — Affinis R. piriformi A. L. Smith.

Hab. ad corticem?, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (J. J. MIRASOL).

## Sect. 5. Hyalophragmiae

CERATOSPHAERIA Niessl. — Syll. II p. 227, IX p. 870, XI p. 340, XVI p. 1137, XVII p. 715, XXII p. 303.

1. Ceratosphaeria Philippinarum Rehm, Ascomyc. Philipp. I, in Philipp. 6831 Journ. of Sci. VIII (1913) p. 186. — Peritheciis gregarie innatis, dein emergentibus, globulosis, 100-120  $\mu$  latis, parenchymatice fusce contextis, hyphis dispersis fuscidulis imprimis ad basim obsessis, usque ad 80  $\approx$  5-10, in rostrum rectum, subcylindraceum, ad apicem acutatum et hyalinellum, fusco-nigrum, 1-1,5 mm. longum, ad basim usque ad 60  $\mu$  latum elongatis; ascis fusiformibus, sessilibus,  $60 \approx 15$ , octosporis, paraphysibus paucis filiformibus obvallatis; sporidiis 2-3-stichis, cylindraceo-clavatis, rectis, apice superiore rotundatis, medio septatis et subconstrictis, demum 3-septatis, hyalinis,  $25\text{-}32 \approx 5\text{-}7$ .

Hab. in vaginis foliorum Bambusae Blumeanae (Graminaceae), Luzon, prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

2. Ceratosphaeria subiculosa Sacc., Notae Myc. XXIV p. 8 (Bull. Orto 6832 bot. Nap. 1918).— Epiphylla; subiculo late effuso atro-maculanti, hyphis ramosis, intertextis filiformibus, septatis, laete brunneis, 4-5  $\mu$  cr.; peritheciis hinc inde in subiculo sparsis v. approximatis, minutis, superficialibus globulosis, 70  $\mu$  diam., membranaceis, parenchymatico-contextis, vertice in ostiolum subulatum pertenue, 140-160  $\times$  5,5-6 atrum productis; ascis clavatis, basi tenuatis, subsessilibus, apice rotundatis, 30-35  $\times$  6,5-8, aparaphysatis, 6-8-sporis; sporidis distichis tereti-oblongis, utrinque obtusulis, 3-septatis, ad septum medium non v. vix constrictis, 4-guttatis, hyalinis, interdum lenissime inaequilateris.

Hab. in foliis Fagraeae curviculatae emortuis (Loganiaceae), Hort. bot. Singapore (BAKER). — Forte affinis Cerat. rostratae sed sporidiorum forma imprimis distincta.

CRYPTODERIS Auersw.—Syll. II p. 229, IX p. 871, XVI p. 535, XVII p. 768.

1. Cryptoderis propinqua Bub. et Vleng., Svensk. Bot. Tid., V, 1911, 6833 p. 329. — Maculis epiphyllis, alutaceo-brunneis, saepe decoloratis

griseis, irregularibus, indistincte marginatis; peritheciis mesophyllo immersis, lenticularibus in epiphyllo valde emergentibus, circ. 1/, mm. latis; contextu parenchymatico intus flavo-brunneo, extus atro-brunneo; ostiolo rostellato nigro, conico, usque ad 1/2 mm. elongato ex hypophyllo erumpente; ascis longe fusoideis, 80-150 \* 8-13, utrinque acutatis; sporidiis filiformibus, parellele fasciculatis. 85-140 \* 2.3, rectis curvulisve, hyalinis, maturis 4-8-septatis.

Hab. in foliis emortuis Salicis Capreae (Salicaceae), Umea. Suecia - Status conidiophorus: Gloeosporium propinguum, quod efr.

2. Cryptoderis hottnica Lind et Vleng. in Svensk Bot. Tid., V, 1911, 6884 p. 327, fig. 1.- Maculis griseo-cinereis amplis, sparsis; peritheciis estromaticis, immersis, utrinque ex lamina folii pustulatim prominulis, sed in ostiolum cylindricum rostellatum obliquum hypophyllum productis, nigris, 0,5 mm. latis, depresso-globosis, contextu minute. celluloso, castaneo-brunneo, fere impellucido; rostello cylindrico atro-brunneo, 750-800 × 80-100; ascis copiosis, cylindricis, sursum obtuse tenuatis, saepe curvis, 240-280 \* 4-5, aparaphysatis; sporidiis parallele fasciculatis, ascum subaequantibus, filiformibus, minutissime guttulatis, 0,7 µ cr., continuis, hyalinis.

Hab. in foliis emortuis Salicis nigricantis (Salicaceae), Umea, Suecia. — Gloeosporium est status conidiophorus.

HYPOSPILA Fr.— Syll. II p. 189, IX p. 849, XI p. 336, XIV p. 587. XXII p. 304.

1. Hypospila ambigua Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 6835 of Sci. VIII (1913) p. 483. — Peritheciis maculiformiter aggregatis. pseudostromate atro tenui cinctis, globulosis, atris, immersis, 100-140 µ circ. diam., coriaceo membranaceis, ostiolo minuto papilliformi; ascis clavatis vel saccatis, brevissime stipitatis, indistincte filiformi-paraphysatis, 38-52 × 11-15, octosporis; sporidiis 1-3-stichis, subfusoideis, rectis vel leniter inaequilateris, utrinque obtuse attenuatis, 3-septatis, hyalinis, non constrictis, 15.20 × 4.5.

Hab. in culmis emortuis Bambusae (Graminaceae), Luzon, prov. Bataan, Lymay, ins. Philipp. (GRAFF).

2. Hypospila Eucalypti Wakefield, Bull. Bot. Gard. Kew, 1912, p. 190. - 6836 Maculis amphigenis, brunneo-rufis, 4 mm. circ. diam.; peritheciis nigris, irregulariter concentrice dispositis, immersis, epidermide bullatim inflata tectis; ascis ellipsoideis, apice subacuto incrassatoque, brevissime pedicellatis, 80-85 \* 25-28, octosporis; sporidiis tristichis, cylindraceis, utrinque obtusis, leniter curvulis, guttulatis dein

1-septatis,  $45-50 \times 5$ .— Adest status pycnidicus, pycnidiis peritheciis similibus, sporulis byalinis, ellipsoideis,  $5-7 \times 1-1,5$ .

Hab. in foliis Eucalypti (Myrtaceae), Darra, Queensland (C. T. White).

#### Sect. 6. Phaeophragmiae

RHYNCHOSPHAERIA Sacc. — Syll. II p. 112 et 228, XVI p. 524, XVII p. 740, XXII p. 305.

1. Rhynchosphaeria Zimmermanni Petrak, Fl. Boh. et Mor. exs. II Ser. 6837 1, Pilze, n. 693; Ann. Mycol. XII, 1914, p. 476.— Peritheciis sparsis v. 2-3 subaggregatis, primum omnino immersis, demum basi tantum insculptis v. raro superficialibus, coriaceo-carbonaceis, globosis, ostiolo conico obtuso pertusis, 500·600 μ diam.; ascis anguste cylindraceo-clavatis, apice rotundatis obtusis, basim versus paullatim attenuatis, breviter pedicellatis, 120-140 × 9-10; sporidiis fusoideis v. fere cylindraceis, saepe plus minusve curvatis v. rectis, utrinque rotundatis, parum attenuatis, 1-3 septatis, ad septa non vel perparum constrictis, primum hyalinis, demum brunneolis, 20-34 × 4-5.

Hab. in ligno decorticato? A bietis (Coniferae), in silvis ad pagum Ohrensdorf prope Mähr. Weisskirchen, Moravia or.

#### Sect. 7. Hyalodictyae

RHAMPHORIA Niessl. — Syll. II p. 307, IX p. 913, XXII p. 306.

Rhamphoria obliqua Karst. — Sacc. Syll. II p. 303. — var. micro-6838 spora R. Maire, Ann. Mycol. XI, 1913, p. 352, fig. 2. — Syn. Teichospora obliqua Karst. — A typo differt peritheciis saepius erectis nec decumbentibus, gregariis; rostro perithecium aequante; ascis minoribus, 80-120 × 10-12; sporidiis minoribus, 16-24 × 8-9.

Hab. in ligno decorticato putrido Quercus sessiliflora e (Cupuliferae), silva Fréhaut prope Hériménil, Meurthe-et-Moselle, Gallia.

### Sect. 8. Scolecosporae

OPHIOCHAETA Sacc. — Syll. II p. 352, IX p. 934, XI p. 352, XIV p. 616, XVII p. 774.

1. Ophiochaeta bakeriana Sacc., Notae Mycol. XX in Nuovo Giorn. Bot. 6839 it. v. 23., 1916, p. 203. — Peritheciis dense gregariis, majusculis,

aterrimis, innatis, dein operculo epidermico circumscisso et secedente liberis sed parce extantibus, 0,5 mm. diam., subglobosis, basim versus hyphis copiosis simplicibus v. parce ramosis, 180-200 contextu indistincto parenchymatico densissimo, fuligineo; ascis fusiformibus utrinque acutis, subsessilibus, 129-130 \* 9-10, aparaphysatis, octosporis, vertice lumine perangusto; sporidiis arcte distichis, fusiformibus, leviter curvis utrinque acutis, 55-60 × 4,5-5, hyalinis, medio 1-septatis, non constrictis, saepe additis 2-4 septis spuriis.

Hab. in trunco emortuo Calami sp. (Palmae), Los Baños, Ins. Philipp.—Pulchra et, ut videtur, distincta species; ad Lasiosphaeriae genus nutans.

2. Ophiochaeta lignicola P. Henn., Hedw., vol. 48. (1908) p. 108.— Pe- 6840 ritheciis sparsis vel gregariis, superficialibus, subgloboso-conoideis, breve ostiolatis, 160-200 μ diam., atris, setulis rigidis subulatis atris acutis 30-80 × 3-4,5 vestitis; ascis subfusoideo-cylindraceis, apice paulo attenuato, rotundatis, tunicatis, octosporis, paraphysatis, 120-140 × 8-11; sporidiis praelongis, filiformibus, hyalinis, utrinque subacutis, pluriseptatis, 80-90 × 2,5-3.

Hab. in ligno emortuo, socio Helminthosporio, hort. Bot. Goeldi, Parà, Brasilia (BAKER).

- LINOCARPON Sydow, Ann. Mycol. 15., 1917, p. 210. Perithecia solitaria, epidermide elypeiformiter nigrificata tecta, ostiolo tantum per epidermidem erumpente. Asci cylindracei, aparaphysati. Sporidia filiformia hyalina.
- 1. Linocarpon Pandani Syd., l. c. Linospora Pandani Syd., Ann. Myc. 6841 11., 1913, p. 60, L. Pandani Rehm, Leafits. of Philipp. Bot. VIII, 1916, p. 2954. - Pseudostromate orbiculari, innato, nigro, convexo, nitidulo, 0,6-1 mm. diam., epidermide adnata semper tecto; peritheeiis solitariis in substantia stromatis, ostiolo minutissimo papilliformi; ascis cylindraceis, aparaphysatis, 100-150 \* 8-11, octosporis; sporidiis filiformibus fere ascorum longitudine, pluries septatis, hyalinis, 1,5-2 µ crassis.

Hab. in foliis emortuis Pandani levis (Pandanaceae), Davao, Mindanao (COPELAND), P. sabutan, Los Baños (S. A. REYES), P. utilissimi, Mt. Banahao prov. Laguna, Luzon, Ins. Philipp. (C. F. BAKER).

# Fam. 4. Xylariaceae Tul.

#### Sect. 1. Phaeosporae

HYPOXYLON Bull.— Syll. I p. 352, IX p. 543, XI p. 385, XIV p. 509, XVI p. 445, XVII p. 855, XXII p. 313.

1. Hypoxylon Torrendi Bresadola, Ann. Mycol. 18., 1920, p. 55.— Stro-6842 matibus superficialibus, cortici adnatis, pulvinatis vel subglobosis, sparsis, raro conglomeratis, tuberculosis, nigris, e peritheciis tantum efformatis, absque basi sterili; peritheciis majusculis, 3-8 in quovis stromate, late obovatis, 0,5 mm. circiter latis, tuberculoso-protuberantibus, ostiolo rudi, raro papillato; ascis cylindraceis, pedicellatis, 170·200 × 12; paraphysibus copiosis, ascos superantibus, 3 μ crassis; sporidiis fusoideis vel navicularibus, uno later interdum strictioribus, fusco-umbrinis, 20·25 × 8-10.

Hab. ad ramos Pistaciae Lentisci (Anacardiaceae), Setubal Lusitaniae (Torrend).— Obs. Habitu ad Hyp. fuscum accedit, affinitate vero Hypoxylo Bagnisii Sacc. videtur proximum.

2. Hypoxylon Merrillii Sydow, Ann. Mycol. 15., 1917, p. 212.— Stro-6843 mata erumpentia superficialia, primitus orbicularia 3-5 mm. lata, dein confluentia crustacea et saepe 2-3 cm. longa 2-2,5 mm. alta, atra, ostiolis minutis prominulis nitidulis punctata; perithecia confertiuscula, plerumque globosa ca. 0,5 mm. diam., monosticha, immersa; asci jam resorpti; sporidia anguste ellipsoidea, continua, 9-10 × 4-4,5, brunnea.

Hab. ad corticem Mahoniae nepalensis (Berberidaceae), Benguet Subprov. in Ins. Philipp. (E. D. MERRILL).

3. Hypoxylon Bartholomaei Peck, N. Y. State Mus. Bull. 150 [1910] 6844 p. 56 (1911). — Stromate effuso, tenui, circ. 1 mm. crasso, 2-3 cm. longo, 0,5-1 cm. lato, subelliptico, levi, atro, opaco; peritheciis monostichis, subglobosis, 500 μ latis, ostiolis vix visibilibus; ascis cylindraceis, 160-200 × 8-12, filiformi-paraphysatis; sporidiis monostichis, ellipsoideis, primo pallidis, 1-2-nucleatis, dein coloratis, 16-24 × 8-12.

Hab. in ligno decorticato Alni rubrae (Betulaceae), Rolling Bay, Washington, Amer. bor. (E. BARTHOLOMEW). — Status juvenilis conidicus non visus.

Hypoxylon chalybaeum B. et Br. var. congestum (Ces.).— Cfr. Syll. I 6845
 p. 260 (sub Rosellinia).

Hab. (adde): in cortice emortuo Castaneae japonicae (Fagaceae), Kawanye-mura prov. Mino, Jap. (HARA). — Var. effusum Sacc. Cfr. l. c. in cortice Quercus sp. Kawanye, Jap. (HARA). — Asci p. s.  $55-60 \approx 4.5$ ; sporidia oblique monosticha,  $9-9.5 \approx 3.5$ . Species multo magis ad Hypoxylon quam ad Roselliniam pertinet.

5. Hypoxylon Carioni Flag., Etude Pyr. Saone-et Loire (Soc. Hist. nat. Autun XXVI (1914) p. 445, t. IV bis).—Stromate parvo, 2-5 mm. diam. subrotundo v. irregulariter pulvinato, colliculoso, carbonaceo, basi substrato (Corticio) immerso, materiâ albâ spissâ ostiolis nigris hinc inde punctulatâ primum et normaliter undique tecto, dein illa partim v. totaliter avulsa, superficie brunneo-fuliginoso et ostiolis prominentibus mamillato; quandoque, superficie stromatis perfectius denudata striolis numerosis lineolas pellis digitorum humanae mentientibus ornato; peritheciis in quoque stromate paucis, 2-9, in collum cylindricum acutiusculum apice nigerrimum attenuatis; ascis cylindricis basi in pedicellum 30-40 μ attenuatis, totis 120-140 × 10-12, poro apicis jodo caerulescente; paraphysibus simplicibus, raro ramosis, pseudoseptatis; sporidiis monostichis oblongofusoideis, demum saturate brunneis, vulgo medio 1-ocellatis, 13-17 × 8-9

Hab. in Corticio (Fungi) quodam, autumno, Armecy Galliae.— Habitu Hypoxylo albo-tecto accedit, sed imprimis sporidiorum notis recedit.

6. Hypoxylon culmorum Cke. — Syll. II p. 263 (in Pleospora). — var. 6847 Bambusae-Blumeanae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2205.— Stromatibus dispersis, raro 2-3-connatis, culmo interdum nigritulo arcte adnatis, orbicularibus, lenticularibus vel convexulis, glabris, 2-3 mm. latis, carbonaceis, primitus albido-pruinosis, mox fusco-atris, demum apice rimosulis denique collabentibus, annulum nigrum relinquentibus, intus fuscis; peritheciis globosis, fere liberis, 10-12, in collum elongatis, 250 μ latis, parenchymatice contextis, stromate innatis eumque vix protuberantibus, ostiolis minimis vix conspicuis; ascis cylindraceis, octosporis, mox evanidis, J +, filiformi-paraphysatis; sporidiis monostichis, oblongis, vix curvatulis, fuscis, 18-20 × 7-9, strato mucoso tenui obductis.

Bab. in culmo emortuo Bambusae Blumeanae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

7. Hypoxylon disjunctum Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 6848 of Sci. VIII (1913) p. 187. — Peritheciis sessilibus, rarissime solitariis, plerumque orbiculatim usque ad 2 mm. diam. 5-15 arcte congregatis, vix ab basim conjunctis, conoideis, glabris, subfuscis, nigre papillulatis, haud annulatis, 0,3 mm. diam.; ascis cylindraceis, p. spor. 80 \* 7, paraphysibus filiformibus obvallatis; sporidiis monostichis, oblongis, utrinque obtusis, subcurvatis, continuis, fuscis, 8 \* 3,5.

Hab. in culmis emortuis Bambusae Blumeanae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Sporidiis ad typum H. epiphloei, H. luridi, H. rutili pertinet, extus H. ochraceo affine, sed forma et dispositio peritheciorum ab omnibus distinctum.

8. Hypoxylon fulvo-ochraceum Rehm, Ascomyc. Philipp. I, in Philipp. 6849 Journ. of Sci. VIII (1913) p. 188. — Peritheciis sessilibus, primitus dispersis, dein orbiculatim 5-10 congregatis, ad basim hyphis fuscis conjunctis, ceterum liberis, glabris, conoideo-globosis, fulvo-ochraceis, atre papillulatis, haud annulatis, 0,3 mm. diam.; ascis cylindraceis usque ad 150 × 8, filiformi-paraphysatis; sporidiis monostichis, ellipsoideis, subnavicularibus, fuscis, continuis, 8-10 × 5.

Hab. in culmis emortuis Bambusae Blumeanae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Affinis H. disjuncti Rehm, sed colore alieno et sporidiis majoribus distinctum.

9. Hypoxylon nummularioides Rehm, Ascomyc. Philipp. VI, Leaflets of 6850 Philipp. Botany, VI (1914) p. 2272. — Stromatibus in culmo immaculato sparsis, sessilibus, discoideis, dein plus minusve elongatis, interdum confluentibus, obtusis, lenticularibus, apice applanatis, raro convexulis, primitus dilute cinereis, mox fusco-nigris, carbonaceis, 5-10 mm. latis et longis, 1 mm. usque altis; peritheciis plurimis, innatis, arcte congregatis, monostichis, globulosis, 200 μ diam., stromatis superficiem interdum paullulum protuberantibus, ostiolo vix conspicuo praeditis, contextu crasso, fusco; ascis cylindraceis 120 × 10, filiformi-paraphysatis; sporidiis monostichis, ellipsoideis, utrinque acutatis, plerumque subcurvatis, continuis, nigrofuscis, 18-20 × 7-8.

Hab. in culmo Schizostach y i (Graminaceae), Los Baños, ins. Philipp. (C. F. BAKER). — E subg. Epixylon.

10. Hypoxylon Piptadeniae P. Henn., Hedw. vol. 48. (1908) p. 11. — 6851 Stromatibus irregulariter effusis, atris; peritheciis subglobosis, 1 mm. circ. diam., disco dilatato, plano, annulato-marginato, ostiolo papilliformi; ascis cylindraceo-clavatis, octosporis, paraphysatis, p. sp.  $50-60 \times 5$ ; sporidiis oblique monostichis, ellipsoideis, obtusis, atris,  $8-10 \times 4-5$ .

Hab. in ramis emortuis Piptadeniae communis (Leguminosae), Osasco, S. Paulo, Brasilia.

11. Hypoxylon Coryphae Rehm, Ascomyc. Philipp. III, in Philipp. 6852 Journ. of Sci. VIII (1913) p. 400 (Sphaeroxylon). — Stromatibus singularibus vel 6-8 gregariis, hemigloboso-conoideis vel placentiformiter convexis, lata basi sessilibus, 1-2,5 mm. diam., 1-8 mm. altis, atris, primitus tenuissime rubro-granulatis, carbonaceis, intus fusco-rubris, fibroso-compactis, extus papillulis minimis vix conspicuis; peritheciis monostichis, globulosis, 200 μ diam.; ascis clavatis, longe pedicellatis, p. sp. 25 × 5-8, octosporis, paraphysatis; sporidiis distichis, ellipsoideis, biguttatis, hyalinis dein subfuscidulis, 5-8 × 3-3,5.

Hab. in petiolis emortuis Coryphae elatae (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER).— H. poroso Mtg. valde affine.

12. Hypoxylon Freycinetiae Rehm, Ascom. Philipp. VIII, in Leafit. of 6853 Philipp. Bot. VIII, 1916, p. 2959. — Stromata dispersa, primitus innata, dein emergentia et sessilia, hemiglobosa, atra, glabra, carbonacea, apice in disculis 2-3 arcte juxtapositis applanatis minutissime papillulata, 2-4 mm. lata et alta; perithecia 2-3 arcte connata, 0,8-1 mm. lata, globosa; asci evanidi; sporae ellipsoideae rectae 1-cellulares, fuscae, 10 × 5. Paraphyses?

Hab. ad emortuos caules Freycinetiae (Pandanaceae), in cacumine Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

13. Hypoxylon coccinellum Sacc., Ann. Mycol. XI, 1913, p. 312.—Stro-6854 matibus gregariis, e basi plana subglobosis, sessilibus, 0,7-1 mm. diam., glabris, carbonaceis, extus coccineo-lateritiis sublevibus, intus totis nigricantibus; peritheciis monostichis, globosis, laxiusculis, 200-220 μ diam., ostiolis non v. vix conspicuis; ascis filiformi-paraphysatis, breviter sensim pedicellatis, 50 60 × 5 p. sporif., octosporis; sporidiis oblique monostichis, elliptico-oblongis, utrinque obtusulis, saepius inaequilateralibus, 8 8,5 × 3,5, fuligineis.

Hab. in cortice ramorum Styracis sp. (Styracaceae), Prov. Mino, Japoniae (HARA). — Spectat ad sect. Sphaeroxylon et imprimis stromatum parvitate ab affinibus dignoscitur.

14. Hypoxylon cadigense H. S. Yates, Philipp. Journ. XII (1917) p. 6855

378. -- Stromatibus superficialibus, hemisphaericis, atris, gregariis, 7.10 mm. diam.; peridium atrum, 150-180 µ crassum, intus albidum; peritheciis numerosis, globosis, circiter 1 mm. crassis; ascis cylindraceis, 150-160 × 12-15, pedicellatis, aparaphysatis; sporidiis monostichis, ellipsoideis, inaequilateralibus, utrinque acutis, fuligineis,  $20-23 \times 8-10$ .

Hab. in truncis emortuis ind. in silvis, Mt. Cading, Tayabas, Luzon, Ins. Philipp.

15. Hypoxylon effusum Nits. - Syll. I, p. 379. - Var. viridarii Sacc., 6856 Notae Mycol. XXIV p. 9 (Bull. Orto bot. Napoli 1918). - Stromatibus interruptis, non vere effusis, sed peritheciis areolato ostiolatis ut in typo; sporidiis paullo minoribus, nempe  $4.5-5.8 \times 2.4$ , fuligineis.

Hab. in ramis corticatis putrescentibus indet., Singapore (BAKER).

16. Hypoxylon excelsum Sydow, Ann. Mycol. X, 1912, p. 80. - Stro 6857 matibus hemisphaericis v. subglobosis, sparsis v. saepe lateraliter connatis, carbonaceis 3/4-11/4 cm. diam., glabris, atris, opacis, intus albidis fibrosis mox plus minusve cavis, basi applanata matrici affixis, superficie aequali, levi; peritheciis monostichis, ovatis v. ovato-oblongis, 0,5-0,7 mm. long., ostiolis haud prominulis; ascis cylindraceis, octosporis; sporidiis fusiformibus v. navicularibus, utrinque attenuatis, continuis, fuscis, 35.50 × 10-14; paraphysibus numerosis, flexuosis, filiformibus.

Hab. ad truncum emortuum, Hayoep, Borneo sud. or. (WINKLER).

17. Hypoxylon indicum Syd. in Syd. et Butl. Ann. Mycol. IX, 1911, 6858 p. 416. — Stromate ad globulos minutos discretos superficiales 1-3 mm. diam. 0,5-1 mm. crassos reducto, stromate interperitheciali parciore, margine sterili nullo, rubiginoso v. obscure rubiginoso; peritheciis 3-15 in quoque acervulo, globosis, carbonaceis, parum prominulis, ca.  $\frac{1}{3}$  mm. diam.; ascis p. sp. 90-110  $\approx$  9-11, octosporis; sporidiis continuis, fuscis, obtusis, 16-19 \* 8-9.

Hab. ad ramulos humi jacentes, Pusa, Indiae or. (E. J. BUTLER).— H. nectricioidis Speg. proxima sed sporidiis majoribus diversa.

18. Hypoxylon lianincola Rehm, Ascomyc. Philipp. IV, Leaflets of 6859 Philipp. Botany, VI (1913) p. 1944.—Stromatibus superficialibus, applanato-sessilibus, gregariis, orbicularibus, 2 mm. latis, 1,5 mm. altis, saepe 2.3 confluentibus inde irregularibus, convexulis, fuscolilacinis, intus fuscis, mox deciduis; peritheciis monostichis, arcte confertis, globulosis, 150 µ diam., stromatis superficiem elevantibus, non protuberantibus; tantum ob ostiola minuta nigra conspicuis; ascis cylindraceis, octosporis, paraphysatis, 70 × 9; sporidiis mono-

stichis, ellipsoideis, rectis vel subcurvulis, biguttulatis, fuscis,  $10-11 \approx 4$ .

Hub. ad truncos emortuos Lianae quaedam, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (M. B. RAIMUNDO). — Affine H. fusco, differt praecipue stromatibus minoribus applanatis.

19. Hypoxylon marginatum (Schw.) Berk.— Syll. I p. 371 — var. mammiforme Rehm, Ascom. Philipp. VIII, in Leaflt. of Philipp. Bot. VIII, 1916, p. 2958.— Stromata sub cortice in ligno late denigrato sessilia, per corticem errumpentia, orbicularia, 3-5 mm. lata, -3 mm. alta, atra. Perithecia 3-6 plane innata, 1,5 mm. diam., in apice stromatis applanato modo disculo 1 mm. lato, crenulato marginato, in centro mammoidee papillulato conspicua. Ceterum ut in species.

Hab. ad ramulos deciduos, Mt. Maquiling Ins. Philipp. (C. F. BAKER). — Disculo mammoidee papillulato facile distinguenda.

20. Hypoxylon Pynaerthi Bresad., Ann. Mycol. IX, 1911, p. 275. — Stromatibus e cortice erumpentibus, atris, oblongis, 2-4 mm. longis, 1-2 mm. latis, 0,5-1 mm. crassis, demum confluentibus; peritheciis plus minusve exertis, numerosis, obovatis, v. subrotundatis, eximie papillatis, 250-300  $\mu$  diam., contextu parenchymatico, ex cellulis polygonalibus, irregularibus, 20-30  $\approx$  16-26; ascis jam absorptis; sporidis navicularibus, diu pallidis, demum atris, 35-37  $\approx$  14-20.

Hab. ad corticem arborum, Kimminga, Congo (PYNAERTH). - Hypox. macrosporo Karst. proximum.

KRETZSCHMARIA Fr. — Syll. IX p. 565, XI p. 287, XIV p. 512, XVI p. 449, XVII p. 614.

1. Kretzschmaria Erythraeae Sacc. in Baccarini, F. Etiopici II n. 77 6862 in Pirotta Ann. Bot. XIV, 1917. — Sacc., Notae Mycol. XXII, p. 188 (1917).— Stromatibus caespitosis dense gregariis et in crustam verrucosam confluentibus, rubiginoso-atris, opacis ad 1 mm. altis, tenue rotundato-clavatis, ad 2 mm. latis, et perithecia singula gerentibus; tunc ellipticis vel sinuosis ad 6 mm. latis, perithecia plurima gerentibus (3-5), ostiolis papillosis concoloribus; ascis cito diffluentibus, paraphysatis, 188-220 × 9-10; sporidiis atris cymbiformibus monostichis, 30-48.

Hab. in trunco emortuo et putrescente, Filfil, Erythraea; lecta quoque in trunco emortuo Noxiae dentatae, sec. torrentem Ghilla ad Montes Deksanà, alt. 1600 m. (PAPPI). — Affinis K. Pecknelli P. Henn.

2. Kretzschmaria gomphoidea Penz. et Sacc. — Syll. XIV p. 512. — var. 6863

microspora Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2206. — Ascis cylindraceis  $5 \mu$  circ. crassis, J +; sporidiis ellipsoideis, interdum subcurvatis, fuscis,  $7.8 \times 3.3,5$ .

Hab. ad truncum decorticatum, Luzon, Prov. Laguna. Los Baños, ins. Philipp. (C. F. BAKER).

3. Kretzschmaria singaporensis Sacc., Notae Mycol. XXIV, p. 10 (Bull. 6864 Orto bot. Nap. 1918). — Caespitibus amplis, 3-4 cm. diam., carbonaceis, fragilibus, totis nigris, superficialibus; peritheciis compositis, fasciculatis, stipite cylindraceo, saepe irregulariter flexo, plus minus cavo suffultis, subglobosis, vertice depressis ibique ostiolis 3-8 (raro singulis) papillatis praeditis; ascis... jam resorptis; sporidiis oblongo ellipsoideis, vix inaequilateris, utrinque rotundatis, 18-20 × 6-6,4, atrofuligineis.

Hab. ad truncos putrescentes indeterm., in Horto bot. Singapore (BAKER). — Habitus Kr. caenopodis etc. sed sporidia multo minora.

#### SARCOXYLON Cooke. - Syll. IX p. 569 ut subgen.

Sarcoxylon aurantiacum Patouillard, Bull. Soc. Mycol. de Fr. 1911, 6865
 p. 331.— Stromate magno, sessili, subgloboso, intus cavo, carnoso, coriaceo-subgelatinoso, aurantiaco, rubro-aureo vel ochraceo, pulverulento-subfurfuraceo; contextu radiante; peritheciis ovoideis, omnino immersis, monostichis, atris; sporis atro-brunneis, ovoideis, levibus, 9-12 × 5-6.

Hab. in ligno emortuo, « Ile des Pins » Nova Caledonia (LE RAT).

2. Sarcoxylon inflatum Pat., Bull. Soc. Mycol. de Fr. 1914, p 345.— 6866 Stromatibus sulfureis dein rufo-ochraceis, caespitosis, foliaceis dein vesiculoso-rotundatis, plus minus compressis lobatisve, levibus, 3-4 cm. altis, intus cavis, gelatinoso-coriaceis, extus carbonaceis, crustula resinosa flava tectis; perith eciis monostichis, ovoideo-globosis, minutis, nucleo atro farctis; ascis claviformibus, stipitatis, 44-52 \* 10 (pars sporif.), 8-sporis, aparaphysatis; sporis uniseriatis, brunneo-olivaceis, ovoideis, 9-10 \* 6, intus 1-2 guttulatis.

Hab. in ligno emortuo marcescenti, M' Brés Congo, Africae (BAUDON). — S. aurantiaco proximum.

#### PHYLACIA Lév. em. Cooke — Syll. IX p. 562 (ut subgen.).

Phylacia pusilla Pat., Bull. Soc. Mycol. de Fr. 1913, p. 223. — 6867
 Stromatibus erectis, sparsis v. approximatis, simplicibus v. ramosis,
 2-3. mm. altis, cylindraceis, dein apice subgloboso-inflatis ibique
 1-1,5 mm. cr., nitidis v. fuscis, levibus v. punctulatis; extus stratu

corticiformi duro, corneo, fragillimo, brunneo-rubrido praeditis; parte inferiori stipitiformi intus carbonacea, sterili et usque ad apicem stromatis producta ibique contextu rubro-brunneo, fragili, sporigeno circumdata; sporis ovoideis v. navicularibus, subinaequilateris, brunneis, simplicibus, levibus, 8-9 × 4-5; ascis non visis.

Hab. ad cortices, La Pho, Tonkin Asiae (DEMANGE). - Ph. globosae, Sagraeunae etc. proxima sed statura minor sporisque diversa.

- **DALDINIA** De Not. et Ces. Syll. I p. 393, XI p. 288, XVI p. 449, XVII p. 616, XXII p. 326.
- 1. Daldinia luzonensis Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 6868 of Sci. VIII (1913) p. 260. Stromate e basi vix stipitiformi exsurgente, demum late placentiformiter expanso, suborbiculari, lobulato-inciso, irregulariter compresso complanatoque, obtuse crasse marginato, fusco-nigro, usque ad 5 cm. lato, 1-2 cm. alto, supera stromatis parte vix ostiolis minimis perspicuis punctulata, intus fibroso, e stratis basi adscendentibus plurimis, horizontalibus, parallelis, concentricis, fuscis, ca. 1 mm. latis contexto; ascis arcte juxtapositis, subcylindraceis, octosporis, 150 × 5, paraphysibus...... destructis; sporidiis ellipsoideis, rectis vel curvatulis, 1-cellularibus, fuscis, 10 × 4-5, atro-inquinantibus.

Hab. ad truncum putrescentem, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

## HENNINGSINA A. Möll. - Syll. XVI p. 450.

1. Henningsina caespitosa Peck, N. Y. State Mus. Bull. 157 (1911) p. 6869 48 et 111 (1912) (Henningsia) — Stromatibus subclavatis, 0,5-1 cm. altis, 3-4 mm. latis in parte superiore ad inferiorem abrupte angustatis, caespitosis, apice obtusis vel subumbonatis, atris, interdum nitidis; peritheciis oblongis, 1 mm. circ. longis, in stromatis parte superiore erectis, substantia stromatis in inferiore parte albida; ascis ovato-clavatis, 36-40 × 14-16; sporidiis inordinate confertis, oblongis, continuis, fuscis, 10-12 × 6-7.

Hab. in cortice Burserae gummiferae (Burseraceae), in ins. Cuba (C. G. BAKER).

- NUMMULARIA Tul. Syll. I p. 395, IX p. 569, XI p. 288, XIV p. 513, XVI p. 1129, XVII p. 618, XXII p. 327.
- 1. Nummularia punctulata (B. et Rav.) Sacc. Syll. I, p. 399. var. 6870 indica Sacc., Notae Mycol. XXIV p. 10 (in Bull. Orto bot. Nap.

1918). — Differt ascis paullo brevioribus, cylindraceis,  $64 \times 5.5$ -6 (nec  $90 \times 9$ ); sporidiis monostichis, 8-10  $\times$  4,8.

Hab. in trunco Glutae Benghas (Anacardiaceae), cultae Singapore (Baker).

2. Nummularia annulata Rehm, Ann. Mycol. XI, 1913, p. 399. — Stroma 6871 erumpens, corticis laciniis adscendentibus cinctum, late effusum, c. 6 cm. long., 3 cm. lat., subplanum, crasse marginatum, perithecia crustacee areolis minutis innata, monostiche conglutinata, ad marginem stromatis plerumque subsolitarie prominentia, omnia cetera in superficie stromatis imprimis versus marginem obscure olivacea, senilia denigrata, ostiolo nigro papilliformi in disculo orbiculari prominente. Stroma intus nigrum, peritheciis globosis 0,3-0,5 mm. lat. arcte connatis formatum. Asci cylindracei, c. 60 × 4, 8-spori. Sporae oblongo-ellipsoideae, plerumque rectae, 1-cellulares, fuscae,  $6.7 \times 2.5.3$ , 1-stichae. Paraphyses filiformes.

Hab. ad corticem? Carpini (Betulaceae), Prov. Batum Cehis-Dzisi Caucasiae in horto Penkov. (NEWODOWSKI). - Habitus Hypox. annulati. A Numm. urceolata sporidiis multo majoribus diversa.

3. Nummularia repandoides Fuck. — Syll. I, p. 397. — Var. singapo- 6872 rensis Sacc., Notae Mycol. XXIV p. 10 in Bull. Orto bot. Nap. 1918.— Dignoscitur ostiolis minus prominentibus, stromatis margine minus distincto, saltem in statu juniore; stroma 3-4 cm. lato, ambitu irregulari, 1 mm. cr.; perithecia tereti-fusoidea, parallele stipata; sporidia oblongo-fusoidea 22 × 6,5, fuliginea.

Hab. in ramis Heveae bras. (Euphorbiaceae), cultae, Singapore (Baker).

4. Nummularia anceps Sacc., Notae Mycol. XXIV, p. 28 (Bull. Orto 6873) bot. Napoli 1918). - Stromatibus disciformibus, convexulis, erumpentibus peridermio cinetis, elliptico-oblongis, 2-3 cm. long., vix 1 mm. medio crassis, carbonaceis, nigris, opacis, margine abrupto, saepe sinuoso praeditis, ubique perithecigeris; peritheciis globosis, monostichis,  $\frac{1}{3}$ ,  $\frac{1}{3}$ , mm. latis, nigris, ostiolis non papillatis sed impressis atque disculum albidum infossum formantibus, 120-130 µ diam.; ascis cylindricis, subsessilibus, 90-120 × 8, paraphysibus filiformibus guttulatis parce obvallatis, 8-sporis, apice obtuse rotundatis; sporidiis monostichis, ellipsoideo-v. obovoideo-oblongis, apice rotundatis, 16-18 \* 7, diutissime totis hyalinis, dein inaequaliter bilocularibus, levibus, subrectis, loculo sup. 3/4 sporidii formanti, atro-brunneo, infero, seu appendice, subtriangulari 5 \* 5, persistenter hyalino.

Hab. in ramis corticatis crassioribus emortuis Quercus pedunculata e v. aff. (Fagaceae), Avellino It. merid., ad rivulum prope « La Ferriera ».—Nummularia uniapiculata S. et P. (Syll. XIV, 513), certe affinis, differt loculo imo seu appendice hyalina conspicue majori, ostioli peculiari charactere etc. Cum typo Nummularia habitu omnino convenit, sporidiorum fabrica vero non parum desciscit.

5. Nummularia reyesiana Rehm, Ascom. Philipp. VIII, in Leaflt. of 687 Philipp. Bot. VIII. 1916, p. 2960. — Stromata dispersa sessilia, matrici adnata, convexula, mox applanata, orbicularia, dein irregulariter explanata, 3-6 mm. lata, 1-1,5 mm. alta, extus albide cineresc. pruinosa, intus atra, carbonacea, zonula orbiculari demum atra, 0,5 mm. lata cineta, ostiolis minimis vix conspicuis; perithecia ovoidea 0,3 mm. diam. 1-stiche congregata; ascis cylindraceis, 120-150 × 10-12, 8-sporis. J +. Sporae ellipticae, utrinque obtusae saepe subcurvatae, 1-cellulares fuligineo-fuscae, 18-20 × 7-9, 1-stichae. Paraphyses filiformes.

Hab. ad Bambusam (Graminaceae), emortuam, Los Baños Ins. Philipp. (S. A. REYES).

6. Nummularia scutata Bk. et Cke.— Syll. IX p. 572.— Teste cl. Rehm, 687 Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 400, diagnosis sic locupletanda. — Stromatibus cortici innatis, mox denudatis, cortice lacerata cinctis, solitariis demum confluentibus, discoideis applanatis, cinereo-nigris, 1-2 cm. diam., 0,3-0,4 mm. cr., carbonaceis, glabris; peritheciis monostiche arcte congregatis, globulosis, 150-200 μ latis, ostiolis in superficie stromatis minimis, haud perspicuis; ascis cylindraceis, teneris, p. sp. 45 × 5, J. —, paraphysibus haud conspicuis; sporidiis monostichis, oblongis vel ellipsoideis, rectis, eguttulatis, fuscis, 5 × 2-2,5.

Hab. quoque in ramis emortuis Litsea e glutinosa e (Lauraceae), Luzon, Prov. Laguna, Los Baños (M. B. RAIMUNDO).— Affinis videtur N. microplaca (B. et C.) Sacc.

7. Nummularia Lianae Rehm, Ascom. Philipp. VIII, in Leaflt. of Phi-6876 lipp. Bot. VIII, 1916, p. 2959. — Stromata emergentia, a cortice marginata, irregulariter longitudinalia, 2-3 cm. longa 1-1,5 mm. lata, cortice evanido demum fere sessilia, undulato-plana, atra 1 mm. crassa, ostiolis minimis punctulata; perithecia conoidea, 1-stiche arcte aggregata 0,8 mm. lata. Ascis cylindraceis, 80 × 9, 8-sporis; sporae ellipsoideae, 1-cellulares, fuscae 10 × 5-6. Paraphyses filiformes.

Hab. ad emortuam lianam verisimiliter B a u h i n i a m (Leguminosae) Mt. Maquiling Ins. Philipp. (C. F. BAKER). — Stromatibus irregularibus, cortice delapso fere sessilibus ab cognatis imprimis divergens.

8. Nummularia anthracodes (Fr.) Cke. — Syll. I p. 365, IX p. 572 — 6877 var. Gliricidiae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2209. — Sporidiis semper dilute fuscidulis, 15-18 × 6-8, stroma demum furfuraceo-fuscidule obtegentibus.

Hab. ad Gliricidia m (Leguminosae), emortuam, Luzon, Prov-Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

9. Nummularia fusco-disca Pat., Bull. Soc. Mycol. Fr. 1915 p. 35. — 6878 Stromate orbiculari v. irregulariter effuso, circ. 5 cm. diam., 2-3 mm. cr., arcte adnato, erumpente, applanato, subconvexo, ob ostiola minutissime punctato, nigro-fusco, carbonaceo, fragili, intus atromargine sterili, 1-3 mm. lato, attenuato, ligno adhaerenti; peritheciis erectis, elongatis, stipatissimis, prismaticis, monostichis, omnino immersis; sporidiis ellipsoideis, leniter inaequilateris, utrinque subacutis, brunneis, 20-30 × 11-15, saepius 21-28 × 12-14.

Hab. in cortice Figure indicae (Moraceae), Magenta prope Nowmea Novae Caled. (LE RAT).

10. Nummularia lamprostoma Sydow, Ann. Mycol. 18., 1920, p. 99. — 6879 Stromata ligno denudato insidentia, 1-2 cm. (vel ultra?) longa, applanata, atra,  $^3/_4$ -1 mm. crassa, carbonacea, tota superficie circa ostiola densissime stipata lenissime depressula; perithecia monostiche arcte congregata, globulosa, ostiolis in superficie stromatis bene conspicuis nitentibusque; asci cylindracei, teneri, p. sp. 45-50 × 3-4, octospori; sporae monostichae, ellipsoideae vel oblongae, continuae, fuscae,  $4-5 \times 2-2^{-1}/_2$ .

Hab. in ramis decorticatis Eugeniae (Myrtaceae), Mt. Maquiling, prov. Laguna, Ins. Philippin. (O. H. REINKING).

11. Nummularia fragillima Rehm, Ascom. Philipp. VIII, in Leaflt. of 6880 Philipp. Bot. VIII, 1916, p. 2959. — Stromata gregaria cortici innata adeoque arcte elato-marginata erumpentia et prominentia, orbicularia, demum confluentia et oblonga, 3 mm. — 1,8 cm. longa, -8 mm. lata, plerumque applanata, vix convexula, nigrofusca, carbonacea, ostiolis nullis conspicuis, fragillima; perithecia elongato-ovalia, arcte congregata, 0,3-0,4 mm. lata et alta; ascis evanidis; sporae fusoideae utrinque acutatae, rectae, 1-cellulares, fuscae, 20-24 × 7-8.

Hab. ad Calamum (Palmae) emortuum, Mt. Maquiling, Ins.

Philipp. (C. F. Baker). — Stromatum forma indoleque, sporarum magnitudine valde egregia species.

12. Nummularia citrincola Rehm, Ascom. Philipp. VIII, in Leaflt. of 6: Philipp. Bot. VIII, 1916, p. 2961. — Stromata congregata, cortici late nigrato innata, dein errumpentia orbicularia, glabra nigrofusca applanata, plerumque obtuse marginata, papillulis pluribus minutissimis obtusis prominentibus, 1-1,5 mm. alta 0,5-2 mm. lata, crasse fusce parenchymatice contexta, ad basim hyphis fuscidulis subramosis obsessa; ascis clavatis apice rotundatis, crasse tunicatis, 70-80 × 20-25, 8-sporis, monostiche stromati fusco-celluloso innatis; sporae ellipsoideae 1-cellulares rubrofuscae, 20 × 12, distichae.

Hab. Citrum (Rutaceae) emortuum, Los Baños, Ins. Philipp. (C. F. BAKER).

13. Nummularia alabatensis H. S. Yates, Philipp. Journ. Sc. XII (1917) 6882 p. 378. — Stromatibus primo subcutaneis, mox erumpentibus, applanatis, carbonaceis, intus et extus nigris, oblongis vel irregularibus, 1-2,5 × 3-10 cm.; peritheciis monostichis, subglobosis, 200-300 μ diam.; ascis cylindraceis, evanescentibus, 75-85 μ longis, 7-8 μ latis, octosporis; sporidiis monostichis, ellipsoideis, utrinque rotundatis, non septatis, fuligineis, 10-11 × 5.

Hab. in truncis emortuis ind. in silvis, Sangirins Alabat, Ins. Philipp. (MERRILL).

14. Nummularia cookeana (Sacc.) Rehm, Ascomyc. Philipp. VI, Leaflets 6883 of Philipp. Bot. VI (1914) p. 2273. — N. suborbiculari var. cookeana Sacc., Syll. I p. 399.— Propter stroma late, non centro tantum, cortici adnatum, non favosum nec albidum, species propria declaranda. — Stroma ex orbiculari late explanatum, 5 cm. usque latum, 2 mm. altum, obtuse marginatum, rubigine crasse obtectum, intus ochraceo-fuligineum; perithecia cylindracea 2 mm. alta, ostiolo convexulo primitus rubiginoso dein atrato praedita; sporidia 12 × 6.

Hab. etiam in ramo emortuo deciduo indet., Mt. Maquiling, ins. Philipp. (C. F. BAKER).

15. Nummularia memorabilis Rehm, Ascom. Philippin. VIII, in Leafit. 6884 of Philipp. Bot. VIII, 1916, p. 2960. — Stromata dispersa cortici interiori innata abeoque marginata dein erumpentia et fere libera, subtus lineola nigra profunde lignum percurrente notata, irregulariter orbicularia, solitaria, interdum confluentia, distincte marginata, atra, glabra, 5-10 mm. lata, 2 mm. alta, carbonacea verrucosula. Perithecia 1-stiche innata, globosa, circiter 0,5 mm. lata; in superficie stromatis applanato-marginata papillula minuscula promi-

nente; asci evanidi. Sporae ellipsoideae, rectae vel curvatulae 1-cellulares, fuscae,  $9-10 \approx 3,5-4$ .

Hab. ad lignum emortuum in cacumine M. Maquiling, Ins. Philipp. (C. F. BAKER). — N. diatrypeoidi Rehm proxima.

16. Nummularia Merrillii Bres., Hedw., 56. (1915) p. 307.— Stromate 6885 cortici innato, majusculo, elongato sinuoso, usque ad 8 cm. longo et 3 cm. lato, nigro, nitido, applanato-colliculoso, ostiolis prominulis, punctato-scabro; peritheciis valde confertis, oblongo-compressis, <sup>3</sup>/<sub>4</sub>-1 mm. longis, 250-300 μ latis; ascis jam resorptis; sporidiis fuscis, ellipsoideis, 10-12 × 6, muticis.

Hab. ad truncos, Negros, Canlaon Volcano, ins. Philipp. (E. D. MERRILL).— Obs. Nummulariae uniapiculatae Penz. et Sacc. proxima, a qua sporis haud apiculo hyalino praeditis, superficie stromatis nitida et peritheciis valde confertis praecipue distincta.

17. Nummularia papyracea Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2208. — Stromatibus gregariis, cortici tenui glabrato innatis, dein erumpentibus, discoideis, oblongis demum elongatis, interdum longitudinaliter confluentibus, 0,5-1 cm. latis, 2 cm. usque longis, crasse marginatis, applanatis, vix convexulis, non ultra ¹/₂ cm. altis, olivaceo-nigrescentibus, haud nitentibus, intus atris; peritheciis arcte congregatis, stromati innatis, oblongis, ostiolis minimis prominentibus, paraphysibus filiformibus obvallatis; sporidiis monostichis, ellipsoideis, plerumque rectis, guttulis binis praeditis, fuscis, 10 ≈ 5.

Hab. ad truncum putridum, Luzon, Prov. Laguna Los Baños, ins. Philipp. (C. F. BAKER).

18. Nummularia subapiculata Ell. et Ev., Journ. Mycol. V, p. 23 (1889), 6887 N. Amer. Pyr. p. 625 (1892). — Subcuticularis, erumpens, 1-2 cm. lata, convexa, 1 mm. crassa v. centro crassiori, margine sterili attenuato; ostiolo leniter papilloso; peritheciis monostichis, oblongis, 0,75 mm. circ. altis, dense confertis et plus v. minus lateraliter compressis; ascis cylindraceis, 90-100 μ long. (p. sp.), basi breviter stipitatis, paraphysibus longis validis intermixtis; sporidis monostichis, oblongo-navicularibus v. inequilateraliter ellipsoideis, pallide flavo-brunneis, 12-16 × 5-7, plerumque uniguttulatis utrinque apiculatis.

Hab. ad truncum, Topeka Kansas, Amer. bor. (CRAGIN).— N. Bulliardi proxima.

19. Nummularia urceolata Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 6888 of Sci. VIII (1913) p. 187. — Stromate st her corticem immutatum,

modo versus lignum atratum, circiter 10 cm. long., 4-5 cm. late expanso, ad marginem crassum obtusumque plus minus lobato. atro, glabro, 1-2 mm. crasso, usque ad marginem fructifero, carbonaceo, intus atro; peritheciis cylindraceis, arcte juxtapositis. 0,5 mm. latis; ascis? cylindraceis evanidis; sporidiis fusiformibus, utrinque acutatis, rectis vel subcurvatis, fuscis, 1-cellularibus,  $12 \times 4.5$ . Tota stromatis superficies multipliciter 0,2-0,25 mm. diam. urceolata, ibique papillulis hemisphaericis peritheciorum plane obtectorum coronata.

Hab. in ligno putrido, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (C. F. BAKER). — Species perdistincta.

- PYRENOPOLYPORUS Lloyd, Mycol. Not. n. 49 (1917) p. 705 fig. 1054-55.— (Etym. Pyrenomyces habitu Polypori). - Stroma pileatum, polyporiforme, extus levigatum, intus carbonaceum, sessile, horizontale, basi minuta adfixum. Perithecia carbonacea, bistratosa, contigua, in parte inferiori stromatis disposita. Asci evanidi. Sporidia ovatooblonga, Hypoxyli, fuliginea. - Ab affini gen. Nummularia videtur differre strato peritheciorum, in resupinatis, non supero sed infero.
- 1. Pyrenopolyporus Hunteri Lloyd, l. c. p. 706 fig. 1054, 1055. Stro- 6889 mate 7-10 cm. lato, 1 cm. cr. nigro, supra levigato, opaco, contextu nigro; peritheciis oblongis, bistratosis, strato 2 mm. crasso; ascis jam resorptis; sporidiis 12 × 6, initio guttulatis.

Hab. ad truncos in Africa (T. HUNTER).

- THEISSENIA Maubl., Bull. Soc. Mycol. Fr. 1914, p. 52 (Etym. a cl. ab. THEISSEN). - Stroma effusum, determinatum, crassum, durissimum, carbonaceum, atrum, mox nudum; perithecia immersa, maxima, cornea, ostiolis angustis, parietibus levibus nitentibusque; hymenium gelatinosum, columellam e fundo perithecii assurgentem tegens; asci pedicellati, octospori, mox diffluentes, paraphysibus rigidis, longissimis obvallati; sporidia oblonga, continua colorata.
- 1. Theissenia pyrenocrata (Theiss.) Maubl., 1. c. p. 52, cum iconibus, 6890 Ustulina pyrenocrata Theiss., Ann. Mycol. 6., 1908, p. 347; Sacc., Syll. Fung. XXII p. 334. - Stromatibus effusis vel pulvinato-effusis, sub corticem mox secedentem nascentibus, atris, opacis, durissimis usque ad 1 cm. crassis stratis tribus distinctis: basali compacto, atro-nitente, saepe vix conspicuo, medio atro-brunneo, fibroso, opaco, superiore nitente, verticaliter fibroso, superficie eroso-perforata. Loculis in strato medio immersis maximis (3-5 mm.)

globosis, depressis vel cylindraceo-globosis, massa glutinosa farctis, parietibus durissimis, atris, nitentibus, extus levibus; ostiolo filiforme, stratum corticale perforante; columella-ovoidea elongata vel depressa, extus fertili intus nucleo nigro zona cellulosa pallescente tecto praedita. Ascis longe pedicellatis clavatis, mox diffluentibus, 8-sp., circ.  $120\text{-}125 \approx 12\text{-}16$  (non maturis); paraphysibus copiosis, longissimis filiformibus, tenuissime septatis, 3-4  $\mu$  crassis; sporidis in apice ascorum distichis vel conglobatis, elongatis, rectis utrinque rotundatis, guttulatis, primum hyalinis demum fuscescentibus,  $16\text{-}22 \approx 5\text{-}7$ .

Hab. corticem in silva, S. Leopoldo (RICK), ad corticem Leguminosae cujusdam (vulgo « minjoleiro ») in silva, Piracicaba (G. BONDAR).

USTULINA Tul. - Syll. I p. 350, IX p. 542, XI p. 285, XXII p. 334.

1. Ustulina Mori K. Hara, Journ. Seric. Assoc. Jap. 1917, p. 389; Mycologia 10., 1918, p. 91. — Stromatibus superficialibus, effusis, 1-4 cm. diam. 2-3 mm. cr., initio carnosis, demum rigidis, laccato-nigris, intus albidis, interdum repandis, superficie inaequali, nigro-punctata, margine subrotundato; peritheciis immersis, seriatim denseque aggregatis prope superficiem, ovoideis, majusculis, 1-1,2 mm. long, ostiolis punctiformibus, pertusis; ascis cylindricis v. clavatis, apice rotundatis, longe pedunculatis,  $110\cdot140 \times 10\cdot12$ , octosporis, paraphysatis; sporidiis monostichis ovato-ellipsoideis v. subfusoideis, obtusis continuis 1-2-guttulatis, atris, 7-10 × 4-5; paraphysibus filiformibus asco longioribus, 1-1,5  $\mu$  cr.

Hab. ad truncos Mori albae (Moraceae), Mino Japoniae (K. HARA). — Ab affini U. microspora forma dimensionibusque sporidiorum diversa.

2. Ustulina placentiformis Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2207. — Stromatibus gregariis, sessilibus, saepe arcte congregatis, semiglobosis, 1-4 cm. latis, 1-3 cm. altis, margine crasso inflexo libero, basi in stipitem brevissimum varie costatum abeuntibus ibique dilute nigrescentibus, in superficie dilute ferrugineis, interdum subrugosis, peritheciis imprimis versus marginem aliquantulum protuberantibus, ceterum vix conspicuis, nigritulis, stromatibus intus fibrosis, fusco-nigris, non zonatis; peritheciis monostiche arcte congregatis, oblongis, 0,5 mm. altis; ascis cylindraceis, perlongis, octosporis, 8 μ latis, J +; sporidiis monostichis, ellipsoideis, rectis vel curvulis, fuscis, 12 × 4,5-5; paraphysibus filiformibus.

Hab. ad lignum putrescens, Luzon, Prov. Laguna, Los Baños. ins. Philipp. (M. B. RAIMUNDO) - var. magnifica Rehm, loc. cit. Stromatibus suborbicularibus, crasse marginatis, ad marginem irregulariter contortis, in superficie undulatis, 5 cm. usque latis, 3 em. usque altis, ferrugineis, papillulis semiglobosis mox fusco-ni. gritulis plurimis obsessis, intus atris, non zonatis; peritheciis evlindraceis 2 mm. usque altis. Caetera ut in typo.

Hab. ad truncum putridum, Luzon, Prov. Laguna, Mt. Maqui. ling, ins. Philipp. (C. F. BAKER).

#### CAMILLEA Fr. — Syll. I p. 346, IX p. 541, XVII p. 670.

1. Camillea africana Wakefield, Kew Bull. 1916, n. 3 p. 74, c. ic. - 6888 Stromate erumpente, substipitato; capitulis coacervatis (ex icone). ad 4 mm, diam., primo furfuraceis, purpureo-fuscis, demum levibus. subnitentibus, fragilissimis; peritheciis erectis, oblongis, immersis. collo destitutis, ostiolis non prominulis, inconspicuis; ascis mox diffluentibus; sporidiis inaequilateralibus, curvulis, ellipsoideis v. subcylindraceis,  $9-10 \approx 4.5$  (-6), fuscis.

Hab. ad ligna putrescentia, Mont. Elgon, Uganda, Afr. trop. - « Habitus potius Kretschmariae ».

PORONIA Willd.— Syll. I p. 348, IX p. 542, XI p. 285, XVI p. 451, XVII p. 620, XXII p. 335.

1. Poronia arenaria Syd. et Butl., Ann. Mycol. 9., 1911, p. 420. - 6894 Stromatibus carnoso-suberosis, in sicco rigidis, superne discoideis, longe stipitatis; disco obscure brunneo, plano v. convexo, 0,5-1,5 cm. diam., rugoso, margine leniter elevato, superficie ob ostiola prominula in depressioni circulari posita punctatis; stipite rugoso usque 6 cm. longo, 3-7 mm. cr. deorsum attenuato, pro maxima parte in terra arenacea infosso, superne disco concolori, deorsum pallidiore, sordide albido et granulis terrae obsito, intus albo: peritheciis omnino immersis, subglobosis, ostiolis papillatis; ascis cylindraceis, 120 × 12; paraphysibus numerosis, filiformibus; sporidiis monostichis, ellipticis v. uno latere applanatis, brunneis v. obscure brunneis, 14-16 × 7-8.

Hab. ad litora arenosa inter Casuarina e arbores, Chatrapur, Madras Presidency, Indiae or. (E. J. BUTLER). - Por. Doumetii Pat. proxima, sed forma, colore, sporidiis diversa.

2. Poronia hypoxyloides Rehm, Ascomyc. Philipp. V, Leaflets of Phi- 6895 lipp. Botany VI (1914) p. 2209. - Stromatibus erectis, 1-2 cm. longe,

2 mm. late stipitatis, stipite cylindrico, versus capitulum lenticulare vel hemisphaericum usque ad 4 mm. dilatato ibique subplicato, glabro, dilute fusco; capitulo primitus orbiculare dein plus minusve irregulare, 3-12 mm. lato, subtus nudo; peritheciis plurimis, superne usque ad marginem crassum arete connatis, conoideis, 0,5 mm. altis et latis, hypoxyloideis, distincte prominentibus, dilute fusco flavidulis, ostiolis conoideis nigris; ascis cylindraceis, paraphysatis, 120 × 10, J +; sporidiis monostichis, fusiformibus, utrinque acutatis, et 1-guttatis, rectis, continuis, fuscis, 12-14 > 4-5.

Hab. ad fasciculos gramineos in humo jacentes, Luzon, Prov. Laguna, Los Baños (E. B. COPELAND).

3. Poronia minuta Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, P. III, 6896 1917, p. 225. —Ad 1-5 mm. alt.; capite 0,5-1,5 mm. diam., irregulariter globoso, subapplanato, ostiolis prominentibus, albo v. brunneo-albo, minute tomentoso, intus rubro-brunneo; stipite ad 0,5 mm. alt., 0,3 mm. diam.; peritheciis sparsis, ovalibus,  $0.4 \times 0.2$  mm.; ascis clavatis, 110 \* 12-14; sporis uniscriatis vel oblique uniscriatis, nigrobrunneis, anguste ovoideis subinequilateralibus, obtusis, 14-18 × 6-8.

Hab. in fimo leporino, Peradeniya, Ceylon, Asia.

4. Poronia gigantea Sacc., Ann. Mycol. XII, 1914, p. 302. Stroma- 6897 tibus longissime stipitatis; stipite 18-20 cm. long. (cum sclerotio), 2,5-3 mm. diam., cylindrico leviter flexuoso sursum sensim tenuato, glabro, sicco crebre longit. sulcato, nigricante, basi selerotiacea nigricante nunc tuberiformis, 12-15 mm. diam., nunc elongata inaequali 4 cm. longa 7-8 mm. cr. intus aeque ac stipite alba, coriacea; cupula discoideo-convexa circ. 1 cm. lata alba, ostiolis papillatis, crebris, nigris punctato-asperula infra concaviuscula, nigra, rugulosa; peritheciis ovoideis, 300-400 µ altis, omnino immaturis, parietibus prima aetate fulvescentibus, materie coriaceo-molli immersis.

Hab. in fimo putrescente Elephantis, in silvis pr. Mundomuzhi in India merid. (M. S. RAMASWAMI). - Quamquam exemplaria sint adhuc immatura, species eximia videtur et tam a multo minori Poronia oedipode, quam ab aque procera sed tomentosa, arenicola et selerotio destituta Poronia Ehrenbergii P. Henn. distincta.

\*) XYLARIA Hill. — Syll. I p. 309, IX p. 523, XI p. 283, XIV p. 504, XVI p. 442, XVII p. 622, XXII p. 337.

<sup>\*)</sup> Theissen Xylariaceae austro-brasilienses (in Denkschr. Math. Nat. Kl. d. K. Akad. Wien LXXXIII, 1909), opus multis iconibus phototypicis ornatum sed caracteribus microscopicis destitutis etiam in descriptionibus et tunc species aegre distinguuntur,

#### Sect. 1. Xyloglossa

1. Xylaria tridactyla Rehm, Ann. Mycol. IX, 1911, p. 363.—Stroma 686 12 cm. longum, stipite subcurvato subcylindrico, 7 cm. longo ad basim 7 mm. lat. juxta clavulam 3 cm. dilatato, tomento hypharum fuscarum, septatarum, plerumque simplicium 3-3,5 µ lat. nigre obtecto, haud piloso, in clavulam ad basim 3 cm. lat. 10 cm. long., 3 cm. altius 3-partitam abeunte; clavula media ad basim 3 cm. lat. 3,5 cm. long., sinistra 2,5 cm. longa 1,5 cm. lat., dextra polliciformi, 1,5 cm. longa 1,2 cm. lat., omnes apice obtusae, superiore pagina convexulae, inferiore concaviusculae, inde subcompressae. intus albae, plenae; clavulae tenuiter plicato-rugosae, cinereo-fuscidulae, peritheciis innatis creberrimis, extus nigricantibus verrucosis, papillulis atris subglobosis prominentihus; perithecia globulosa, 0,2 mm, diam., monosticha; ascis cylindraceis, perlongis, 7 µ cr., J- ope +, octosporis; sporis monostichis, 1-cellularibus, ellipsoideis, utrinque acutatis, rectis v. subcurvatulis, fuscis,  $12 \times 4.5.5$ ; paraphysibus filiformibus.

Hab. Escuintla, Chiapa Mexico (CRAWFORD). — Stipes Xylariae hujus ex ligno putrido v. tumulo Termitarum enasci videtur.

2. Xylaria varians Sacc., Notae Mycol. XXIV p. 11 (Bull. Orto bot. 688 Nap. 1918). — Polymorpha, nunc elevata, tortuosa, breviter stipitata, nunc prolifera irregulariterque furcato-ramosa, nigerrima, intus farcta, alba, superficie rugoso-colliculosa; peritheciis globosis, infossis, stipatis, 0,5 mm. diam., ostiolis fere latentibus; ascis cylindricis spurie paraphysatis, apice rotundatis, p. sp. 55 × 4,8-5, stipite 30-35 × 1-2; sporidiis monostichis ellipsoideis, minutis, subinaequilateris, 8 × 4, fuligineis.

Hab. ad truncos indeterm. putres, in Horto bot. Singapore (BAKER). — Species ambigua; an affinis X. dicerati Lév. v. X. variabili W. et C.?

3. Xylaria scopiformis Mont. — Syll. I, p. 340 — var. heveana Sacc., 6900 Notae Myc. XXIV, p. 11 (Bull. Orto bot. Nap. 1918). — Stipite glabro, insiticio, cylindraceo, 2 cm. longo, 1-1,5 mm. cr., in clavulam tereti-clavatam brevissime apiculatam aequilongam 3-3,5 mm. crassam sensim dilatata; clava intus alba subfistulosa, extus nigricanti; peritheciis globulosis, parum prominulis, 0,5 mm. diam.; ascis anguste tereti-clavatis, p. sp. 80-90 × 6; sporidiis oblongis curvulis, utrinque acutulis, saepius 2-guttatis, dilute fuligineis, 12-13 × 4,8.

Hab, ad truncos Heveae brasiliensis (Euphorbiaceae), cultae, Singapore (BAKER). - A typo differt sporidiis majoribus etc. et forte specifice separanda.

4. Xylaria Gigantochloae Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 6901 of Sci. VIII (1913) p. 261. - Stromatibus sessilibus solitariis, oblongo-conoideis, apice rotundatis, ad basim contractis, vix nigre stipitatis, glabris, fuscis, 4-5 mm. altis, 3-4 mm. diam. undique usque ad apicem ostiolis minutissimis hemiglobosis atris punctulatis, intus nigris, carbonaceis; peritheciis globulosis, innatis, non prominentibus, 100 µ diam.; ascis cylindraceis, octosporis, filiformiparaphysatis, 50 \* 5-7, J-; sporidiis monostichis, ellipsoideis, plerumque 2-guttatis, continuis, fuscis, 7-8 \* 3.

Hab. ad Gigantochloam Scribnerianam (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).— Minuta, X. fulvellae B. et C. et X. Trianae Lév. affinis sed bene distincta.

5. Xylaria pistillariaeformis Baccarini, F. Etiop. II n. 81 in Ann. Bot. 6902 14., 1917, p. 134. — Stipitata, stipite adscendente, ruguloso, 3-9 cm. longo 2 mm. lato, simplici vel bifido et tunc ramulis in clavulas aequales, teretes vel compressas desinentibus; clavulis 3-4 cm. altis, 1,5 cm. latis, griseis, ob perithecia prominula scabrosis, intus albidis, undique fertilibus; peritheciis globosis, papillatis; peridio pallide cinereo griseo, ostiolo autem atro prominulo, 522 µ latis, 720 altis; ascis stipitatis apice rotundatis cito diffluentibus 144 ≥ 16; sporidiis oblique monostichis, oblongis, inaequilateralibus,  $27 \times 16$ . Paraphyses non visae.

Hab. solo argilloso, Mansura, Beni Amer, Erythraea, Africa or.

6. Xylaria glaucescens Sacc.; Notae Mycol. XXII p. 189 (R. Accad. 6903 Pad. 1917).— Valde affinis X. melanaxi, dignoscitur clava cynereoglaucescente, ostiolis conspicue prominulis, atro-punctata, intus grisea sed axi nigricante percursa, aeque tereti-fusoidea, 3,5 cm. longa, 4 mm. cr., in stipitem cylindraceum tortuosum radicantem 3-4 cm. long. 1,5 mm. cr. producta; ascis cylindricis, 28 × 3-3,2 p. sp.; sporidiis monostichis ellipsoideo-globosis, exiguis, 3,6-4 × 3-3,2, fuligineis.

Hab. inter saxa aggeris murarii viae Dongollo, Ghinda, Erythraeae, Africa or. - A Xyl. melanaxi colore clavae ostiolisque magis prominentibus distingui meretur.

7. Xylaria partita Lloyd, Mycol. Notes, n. 48 (1917) p. 675 f. 1002. — 6904 Stipite simplici v. ramoso, interdum in apice clavae prolifero, fili-

formi, glabro, clavam subaequante; clava 0,5-1,5 cm. longa, 1 mm. cr., nigra, fragili, nodulosa; sporidiis generis.

Hab. ad truncos, Porto Rico (J. A. STEVENSON). — Forte forma ramosa prolifera Xyl. scopiformis, ex auctore.

8. Xylaria concursa Lloyd, Mycol. Not. n. 48 (1917), p. 678 fig. 1009.— 68 Stipite ramoso; ramis clavas fertiles 1-2 et conidiophoras 1-2 gerentibus; clavis cylindraceo fusoideis, 3 cm. long., 1,5-2 cm. cr. apice acutis v. rotundatis; peritheciis immersis, non eminentibus; sporidiis 14 × 6-7; substantia stromatis alba, parca.

Hab. ad truncos in Chile (MARCIAL R. ESPINOSA). — Affinis X. gracili (Cfr. l. c. fig. 1008) sed distincta dicitur ob clavas ascophoras et conidiophoras ex eodem stipite sed separatas.

9. Xylaria cavernosa Lloyd, Myc. Not. n. 51 (1917) p. 728 fig. 1092.— 694 Clavula globosa, nigra, corrugata, contextu albo, firmo, intus cava; stipite distincto, nigro, glabro; ascis et sporidiis... immaturis.

Hab. ad truncos in ins. Java (J. P. MOUSSET). — Diversa ab affini Xyl. obovata, sed, deficiente fructificatione, adhue dubia.

10. Xylaria albo-maculata Lloyd, Mycol. Not. n. 51 (1917) p. 725, fig. 6907 1081-1082. — Clavulis angustis, gracilibus, fortiter (ob perithecia) mamillosis; peritheciis hemisphaerico-prominulis nigris, supra ostiola albo-punctatis; parte fertili 2-3 cm. longa, 2 mm. cr., saepius in appendicem sterilem aequilongam apice productis; stromate parco, albo; stipite filiformi glabro 1-2 cm. longo; peritheciis seminmersis; sporidiis 14 × 7.

Hab. ad truncos in Chile (M. R. ESPINOSA). — Affinis Xyl. sco-piformi sed areolis albidis distincta.

11. **Xylaria radicans** Lloyd, Myc. Not. n. 51 (1917) p. 725 fig. 1080.— 6908 Clavulis oblongis, obtusis, 1-1,5 cm. long., 4-5 mm. cr., totis fertilibus, sessilibus v. stipite non discreto a basi radicanti 2-3 cm. longa, 3 mm. crassa; parte fertili levi, griseo-nigricanti, peritheciis vix prominulis; sporidiis 12 × 5.

Hab. verisimiliter ad terram sed e fragmentis ligneis nascens, in Congo belgico (P. HYAT VANDERYST).— Affinis, ut videtur, Xylariae radicatae, quae parte radicanti 1 cm. lata certe differt.

12. Xylaria eudonia Berk. et C.— Syll. I p. 322, Cooke, Grevill. 1882, 6909 tab. 168 f. 83, Sacc. Notae Mycol. XXII p. 188 (1917).

Hab. (adde) in fragmentis ligneis ad terram silvaticam, Dongollo, pr. Ghinda.— Pulchella species; asci  $50.55 \times 4,7.5$  p. sporif.; sporidia ovoideo-reniformia,  $10.12 \times 4,5.5$ . Mensura sporidiorum a Cookeo data, l. c. p. 82, erronea quoad latitudinem.

Xylaria marasmoides Berk. et Cooke — Syll. I p. 312; Cooke, Grev. 6910
 1882, t. 168 p. 81; Sacc., Notae Mycol. XXII p. 189 (R. Acc. Pad. 1917).

Hab. (adde) ad radices putrescentes graminum, Scek Omar pr. Ghinda, Erythraea. — Etsi speciei typicae asci et sporidia ab auctoribus non describantur, tamen erythraea videtur ipsa. Forte omnium minima; stipes 10 mm. long. filiformis, sursum crassior, nigricans, glaber, deorsum tenuato-radicatus; capitulum subhemisphaericum, 1-1,5 mm. lat., nigricans, sed superne leviter dealbatum et ostiolis paucis punctiformibus exasperatum; perithecia tantum supera, 8-10; asci breviter stipitati, cylindrici,  $30-32 \approx 3,5-4$  p. sporif.; sporidia ellipsoidea, inaequilatera,  $4,7-5 \approx 3$ , fuliginea.

#### Sect. II. Xylocoryne

14. Xylaria transiens Theissen, Denkschr. Math. Nat. K. d. K. Akad. 6911 Wiss. Wien 1909, p. 62 t. I fig. 3 t. XI fig. 2.— Stipite crasso columniformi violaceo-pannoso, 2-3 cm. longo, 7-16 mm. cr. in clavam transiens; clava primo gilvo-isabellina, dein rubro-aurantia, v. brunneo nigrescente, late compresso-ovata v. spathulata, rotundata, 12-20 mm. long. 2-4 mm. cr., intus farcta superficie reticulatofissa; peritheciis prorumpentibus ostiolis aeneo-nigris obtusissimis, globosis, stipatis,  $500\text{-}700~\mu$  diam.; ascis  $100\text{-}120 \times 10\text{-}11$ , pedicello  $40\text{-}70~\mu$  longo; sporidiis oblongo-ellipsoideis, grosse 1-2-guttatis, rotundatis, opacis,  $19\text{-}24 \times 9\text{-}10$ .

Hab. in lignis in Brasilia-australi.

#### Sect. III. Xylostyla

15. Xylaria Hypoxylon Grev.—Sacc. Syll. I, p. 333 — var. erythraea Baccarini, F. Eritr. II n. 80 in Pirotta Ann. Bot. 14., 1917, p. 134. — Stromate erecto tereti vel parum compresso, nunc simplici, nunc vero semel vel bis dichotomo, atro, basim versus indumento pannoso rufo-brunneo vestito; clavulis perithecigeris stipite crassioribus, apice sterilibus et saepe attenuatis; peritheciis ovatis paulo prominentibus 720  $\mu$  latis, stipite clavulâ breviore et interdum obliterato; ascis 120  $\times$  4,8, paraphysatis; sporidiis monostichis, 10-12  $\times$  4.

Hab. ad lignum emortuum ad rivum Ghillà, sub montibus Deksanà, Hamasen, Erythraea (PAPPI).

16. Hylaria Hypoxylon (L.) Grev. — Sacc. Syll. I p. 333 — f. tropica 6913

Syd. et Butl., Ann. Mycol. IX, 1911, p. 418; XV, 1917, p. 212.— Sporidiis  $9.12 \times 3.5$  sed e typo recedunt habitu tuntum eximie variabile.

Hab. ad lignum vetustum, Solebili, Balehonnur, Barguai, Mysore, Indiae or. (E. J. BUTLER).

17. **Xylaria pallida** B. et Cke.— Syll. I p. 327 — var. **luzonensis** Rehm, 69 Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2211. — Stromatibus plurimis ex communi saepe incrassata basi evolutis, cylindraceis, parallelis, rectis vel subcurvatis, 40 mm. usque altis, 3-3,5 mm. circ. cr., ad apicem sensim steriliter attenuatis, albo-pallidis, longitudinaliter striatulis, intus albis; sensim in stipitem glabrum atratum, angustiorem, ad basim dilatatum, 20 mm. usque longum abeuntibus; peritheciis sparsis, innatis, in striis protuberantibus, atris, globulosis, vix ostiolatis, 0,5 mm. diam., aseis fusoideis, pedicellatis, 120 × 12-14, octosporis, J +, filiformi-paraphysatis; sporidiis mono-vel distichis, rectis vel navicularibus, utrinque acutatis, biguttatis, fuscis, 18 × 5.

Hab. ad truncum emortuum Gliricidiae (Leguminosae), Luzon, Morong Valley, Ins. Philipp. (M. B. RAIMUNDO).

18. **Xylaria bacillaris** Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 6915 Botany, VI (1914) p. 2212. — Stromatibus bacillari-cylindraceis, solitariis vel ad basim binis conjunctis, rectis, S mm. longis, 3 mm. usque latis, fuscis, extus striatulis, ad apicem sterilem album 2,5 mm. long. acutatis, intus atris vix conspicue stipitatis, glabris; peritheciis innatis, globulosis, in stromatis striis vix conspicuis, minutissime papillulatis 200 μ diam.; ascis cylindraceis, paraphysibus filiformibus obvallatis, 80 × 9, J +; sporidiis oblongis, utrinque rotundatis, rectis vel subcurvatis, continuis, fuscis, 10-11 × 4.

Hab. ad Spondiam (Anacardiaceae), emortuam, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Differt a X. botuliformi Rehm imprimis colore stromatis, peritheciis non prominentibus, sporidiis multo majoribus.

19. Xylaria morchelliformis Rehm, Ann. Mycol. IX, 1911, p. 371. — 6916 Stromate erecto, 2 cm. alt. 0,5 cm. lat. e basi lata ad apicem sensim acutato, apice 2 mm. longo obtuso sterili fuscidulo, vix compresso, stromate perithecigero a stipite brevissimo glabro 2-3 mm. longo distincte limitato, fusco-nigro, valde rugoso, glabro, intus albido; peritheciis creberrimis innatis, globulosis, 0,3-0,5 mm. diam., excipulo parenchymatice contexto, papillula hemiglobosa nigra prominentibus; ascis cylindraceis longissimis, 8-sporis; sporis oblon-

5 of 1'

gis, utrinque obtusis, plerumque subcurvatis, fuscis, 1 cellularibus, 15-18 × 6-7, monostichis; paraphysibus filiformibus; stromate conidiferum aequilongum, corniforme, acutatum, fere ubique fuscopruinosum.

Hab. Hawai (ATKINSON). - Stipite minimo, stromate morchelliformi, non spathulato, papillis semiglobosis distincta.

20. Xylaria setocephala H. S. Yates, Philipp. Journ. Sc. XII (1917) p. 6917 379. — Stipitata, gregaria, minuta, stipit. 12-14 mm. longis, 0,25-0,5 mm. diam.; peritheciis paucis, ad 30-40, capitulis atris, subglobosis vel ellipsoideis, 1-5 mm. longis et 1-2,5 mm. latis; ostiolis punctato asperulis, seta apicali 5-8 longa praeditis; ascis cylindraceis, apice rotundatis, stipitatis, paraphysatis, 89-100 × 7-8, octosporis; sporidiis monostichis, ellipsoideis, 13-15 × 6-8, fuligineis.

Hab. in foliis dejectis Garciniae sp. (Guttiferae), Basiad Tayabas, Luzon, Ins. Philipp. - Seta terminali ratione praelonga dignoscenda. Species quae chaetocephala rectius dicenda.

21. Xvlaria vagans Petch, Ann. of R. Bot. Gard. Peradeniya, v. VI, 6918 P. I, p. 26, tab. VII fig. 5-10 (1915). — Cent. 1-4 alta; stipite 0,5 mm. diam., nigro, glabro, longitudinaliter striato; clava 5-15 mm. longa, 1 mm. diam., continua v. interrupta, apice in processu praelongo filiformi producta; peritheciis prominentibus, ostiolo acuto, ovalibus, 0,5 × 0,3 mm.; ascis cylindraceis, longe pedicellatis, octosporis, sporis oblique uniseriatis, parte sporifera 68-72 × 6; sporis cymbiformibus, apice obtusis, nigro-brunneis, 9-12 × 5-6; mycelio rhizomorphoideo.

Hab. ad folia dejecta, Hakgala, Ceylon Asia.

22. Xylaria Phyllocharis Mont. — Syll. I p. 342 — var. hirtella Theiss., 6919 Denkschr. Math. Nat. Kl. d. K. Akad. Wiss. Wien 1909 p. 53. -Stipite 1-3 cm. longo, badio-nigro, subtorto fusco-hirtello, sed non raro glabrato, striato, delicato; clava 6-8 mm. longa, 600-800 µ cr., atra, torulosa, breviter apiculata; peritheciis semiliberis, globosis, subconico-attenuatis, ostiolo exerto, hemisphaerico v. conico; aseis 70-95 × 7-9, pedicello 20-55 µ longo; sporidiis brunneo-atris, obtusis, gibboso-inaequilateris, rarius rectis, grosse guttalatis, delicate hyalino-tunicatis haud appendiculatis, 12-14 > 6,5-8,5:

Hab. in foliis siccis in Brasilia australi (RICK). - A typo differt peritheciis semiliberis, stipite hirtello, clava non ramosa etc. A X. delicatula, cui affinis, satis diversa.

23. Xylaria botuliformibus Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 6920 of Sci. VIII (1913) p. 188. - Stromatibus gregariis, cylindraceis,

apice obtuso breviter cylindraceo-mucronato, sterili, rectis vel subcurvatis, 7-9 mm. longis, 2-3 mm. latis, atris, glabris, undique peritheciis arcte juxtapositis, hemiglobose prominentibus, poro perspicuo pertusis, breviter papillulatis, ca. 200  $\mu$  diam., obsessis, rugoso-scabris, intus albis, in stipitem subcylindraceum, longitrorse rugosum, 1-5 mm. longe elongatis; ascis cylindraceis, perlongis p. sp. 35  $\times$  5, paraphysibus filiformibus obvallatis, 7-vel 8-sporis; sporidiis monostichis, ellipsoideis, rectis vel subcurvatulis, continuis, fuscis, 6-7  $\times$  2-5.

Hab. ad lignum putridum, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (C. F. BAKER). — Species minuscula, X. gracillimae P. Henn. affinis sed bene distincta.

24. Xylaria Theissenii Lloyd, Mycol. Not. n. 48 (1917) p. 677 fig. 1007.— 6921 Stipite elongato, gracili, usque ad 7-10 cm. longo, 1-1,5 mm. cr., glabro, in terra (?) radicante; clava brevi 1-1,5 cm. longa, in apicem subulatum producta; peritheciis partim immersis sed plerisque subliberis, clavam tuberculosam reddentibus; sporidiis majusculis 24-28 × 9-10.

Hab. in Brasilia (THEISSEN, Exs. n. 235).

25. Xylaria excelsa Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 6522 418 fig. 8. — Longissima, subflexuosa, e terra (?) emergente, infra longe radicata, tota cum radice 20 cm. (vel ultra?) longa, radice ca. 10 cm. (vel etiam ultra?) longo, 3 mm. cr., atro-brunneo; stipite elongato, quam radice tenuiore, 7-9 cm. longo, 1,5-2 mm. cr., glabro, aequali, sulcato, sordide brunneo; clava anguste conicocylindracea, parte fertili 1-2 cm. longa 3-6 mm. lata brunnea, apice sterili longissimo filiformi usque 3 cm. longo praedita; peritheciis minutis, laxe sed subaequaliter per totam clavam dispersis, immersis, conico-globosis, atris, ostiolo tantum prominulis, 300-400 μ diam.; ascis octosporis 120-144 × 11-15,5; sporidiis continuis, fuscis, utrinque capitulo hyalino mucoso instructis, 28-35 × 8-12 (sine muco).

Hab. ad terram (?) Narsinghpur District, Central Provinces, Indiae or. (J. H. BURKILL). — Xyl. Thyrsi (Berk.) Sacc. proxima sed statura majori, peritheciis minoribus etc.

26. Xylaria filiformis (Alb. et Schw). Fr. — Syll. I p. 342 — f. cau- 6923 lincola Rehm, Ascom. Exsicc. fasc. 49 n. 1969, Ann. Mycol. X, 1912, p. 57.— Sporis 12-15 \* 5-6 nec ut in forma foliicola Ellis 14-18 \* 3-4. Hab. in caulibus vetustis Archangelicae (Umbelliferae), London Ont., Canada, Amer. bor. (Dearness).

4.1

#### Sect. IV. Xylodactyle

27. **Xylaria aristata** Mont. — Syll. I p. 333 — var. hirsuta Theiss., Denkschr. Math. Natur. Kl. d. K. Akad. Wiss. Wien 1909 p. 59, t. VII f. 5. — Stromate filiformi, atro-glaucescente, basi vix incrassata, pilis atro-fuscis hirto, 10-22 mm. longo 0,3-0,5 mm. er., sulcato; capitulo primo dealbato, dein griseo-atro, 1-2 mm. diam., subtus non striato; peritheciis globosis tuberculato, apice mucrone brevi acuto conico coronato v. omnino obtuso v. stromate filiformi longe superato; peritheciis magnis, 600 μ diam., semiliberis, ostiolo nigro papillato in areola generatim cinerescente insignitis; ascis 90-120 × 8-10, pedicello 35-70 μ longo; sporidiis subdistichis, utrinque angustatis, rectis v. inaequilateris, 14-20 × 7-9.

Hab. in foliis siccis Psidiii sp. (Myrtaceae), in Brasilia australi (RICK).

28. **Xylaria calocephala** Sydow, Engler' Botan. Jahrbüch. 54., 1916, 6925 p. 255, fig. 1 F.— Sparsa, vel subinde binae, basi connexa, stipitata, capitata; stipite simplici, rarius bifido, cylindraceo, e basi vix incrassata insititio, atro, pilis ca. \(^1/\_2\) mm. longis patentibus usque ad capitulum dense hirsuto, 2,5-6 cm. longo, ca. 1 mm. crasso; capitulo globuloso vel subellipsoideo, 2-3 mm. longo, 1,5-2,5 mm. lato, atro, glabro, punctato-asperulo, mucrone apicali usque 4 mm. longo praedito; peritheciis immersis monostichis, \(^1/\_2\)-1 mm. diam., atris; ostiolis punctiformibus, lenissime prominulis; ascis cylindraceis, 150-175 \(\times\) 13-17, octosporis, paraphysatis; sporidiis recte vel oblique monostichis, ellipsoideis, continuis, fuscis, 23-28 \(\times\) 10-12.

Hab. ad ramos emortuos, Lordbeug, Nova Guinea nord. or., Africae (LEDERMANN).

THAMNOMYCES Ehrenb. — Syll. I p. 334, IX p. 537, XVII p. 633 (at subg.).

1. Thamnomyces siculus (Pass. et Beltr.) Maire, Myc. Bor. Afr. fasc. 6926 4., 1912, n. 100, et Bull. Soc. Hist. Nat. Afrique du Nord 1915, p. 133, tab. 3.— Status conidicus (hucusque ignotus):— Stromatibus capilliformibus, flexuosis, atris, laevibus nitentibus apice-albo farinoso sensim attenuatis, acutis; hyphis superficialibus apicis conidiophora erecta, simplicia cylindracea, continua v. 1-septata hyalina, numerosissima 8-9 × 2,5-3 gerentibus; conidiis solitarie acrogenis fusiformibus utrinque acutiusculis hyalinis laevibus, 4-5 × 1,5-2.

Hab. in foliis dejectis Oleae europeae (Oleaceae), Algeria, Africa bor.

# \*) Fam. 4. Coryneliaceae Sacc.

Conspectus Generum (sec. Cl. Fitzpatrick)

#### A. Sporidia e sphaeroidea ovoidea

- I. Perithecia distincte pedunculata
  - a. Perithecia apice non prolifera
  - b. Perithecia prolifera
- II. Perithecia non distincte pedunculata
- B. Sporidia stellata

- 1. CALICIOPSIS
- 2. Sorica
- 3. CORVNELIA
- 4. TRIPOSPORA

CORYNELIA Achar. — Syll. II p. 813, IX p. 1073, XVI p. 650, XXII p. 513.

1. Corynelia portoricensis (Stevens) H. M. Fitzpatrick, Mycologia, 12., 6927 1920, p. 259, fig. 1-3, 42. — Syn. Cor. clavata var. portoricensis Stevens, Trans. Ill. Ac. Sci. 10., 1917, p. 178-181 fig. 5. — Stromatibus sparsis, e circularibus elongatis, saepe mox erumpentibus, subcarbonaceis, intus homogeneis et nigris, superficie nigra et rugosa, amphigenis sed plerumque hypophyllis quandoque folium totum penetrantibus et tunc utrinque visibilibus, caulicolis v. etiam fracticolis; peritheciis 1-30, plerumque 11, magnis, usque 1,5 mm. long., maturis plerumque marginalibus junioribus centralibus; peritheciis junioribus e conoideis breviter cylindraceis apice rotundatis, maturis nonnullis apice trilobis nonnullis bilobis late dehiscentibus et circ. 0,5 × 0,25 mm. crassis; ascis e clavatis ovoideis, p. sp., 25-50 × 14-25, typice 3-sporis, rarius 2-sporis v. 1-sporis; sporis 10,5-16,5 μ diam. plerumque 12-13,5 μ.

Hab. parasitica in Podocarpo coriacea (Coniferae), prope Maricao Porto Rico, Amer. bor.

2. Corynelia nipponensis H. M. Fitzpatrick, Mycologia 12., 1920, p. 6928 253, fig. 19.— Stromatibus sparsis 1-4 mm. diam., hypophyllis, elongatis erumpentibus, quandoque plus minus circularibus, confertis et crustas e perith. 10-40 et ultra constitutas efformantibus; peritheciis e basi angustata, apice dilatato-rotundatis et infra con-

<sup>\*)</sup> Conferenda est Cl. H. M. FITZPATRICK, Monographia Coryneliacearum, in « Mycologia » v. 12., 1920, pp. 206-237, 239-267, fig. 1 et tab. XII-XVIII.

strictulis; ascis, p. sp., 30-42  $\approx$  17-27, 8-sporis; sporis 8,5-11 (plerumque 10  $\mu)$  diam.

Hab. parasitica in foliis Podocarpi macrophyllae (Coniferae), Japonia. — Cor. uberatae Fr. proxima, sed caracteribus peritheciorum diversa.

3. Corynelia bispora H. M. Fitzpatrick, Mycologia, 12., 1920, p. 242.— 6929 Syn. C. clavata f. macrospora Sydow.— Stromatibus sparsis, parvis, hypophyllis; peritheciis anguste subpiriformibus, collo apice dilatato parum prominenti; ascis part. sp.,  $60 \times 17$ -20, bisporis; sporis 11-15  $\mu$  diam.; pycnidiis praesentibus; pycnosporis hyalinis, in massa flavescentibus, fusoideis, 5-8  $\times$  2.

Hab. parasitica in foliis Podocarpi milanjiani (Coniferae), in regione Ruwenzori, Africa Centr.

4. Corynelia jamaicensis H. M. Fitzpatrick, Mycologia 12., 1920, p. 6930 262, fig. 6,7. — Stromatibus sparsis, plerumque ambitu e circularibus ellipsoideis quandoque magis elongatis, 1,5-7 × 1,5-3 mm., subcarbonaceis, hypophyllis; peritheciis 20-100 v. ultra confertis, maturis usque 1,5 mm. long. circ. 0,5 mm. cr., plerumque trisulcatis et trilobis, nonnullis etiam 4-5-lobis; ascis e clavatis obovatis, p. sp. 28-42 × 15-27, typice 3-sporis, nonnullis 2-sporis; sporis 11-15 μ diam.

Hab. parasitica in Podocarpo purdienana (Coniferae), Jamaica, America bor. — Cor. oreophilae v. etiam portoricensi proxima.

5. Corynelia brasiliensis H. M. Fitzpatrick, Mycologia, 12., 1920, p. 6931 257. — Stromatibus sparsis e circularibus leniter elongatis, quandoque erumpentibus, nigris, minute rugosis, plerumque hypophyllis v. caulicolis, e 5-20 perith. efformatis; peritheciis 1 mm. eirc. long. quandoque confertis et stromata tegentibus quandoque marginalibus v. radiatim dispositis, infra cylindraceis rugosis, supra compressis dehiscendo bilabiatis; ascis 8-sporis, ellipsoideis v. ovatis, p. sp.  $34\text{-}42 \times 22\text{-}30$ ; sporis  $10\text{-}12~\mu$  cr.

Hab. parasitica in foliis Podocarpi sp. (Coniferae), in Brasilia.

6. Corynelia pteridicola F. L. Stevens, Trans. Illin. Ac. of Sc., v. X, 6932 1917, p. 179, fig. 6.— Maculis e vix 1 mm. diam. usque 3-4 mm. saepius hypophyllis; stromatibus parvis 0,5-3 mm. diam. centro secedenti et tunc aetate anularibus; peritheciis numerosis v. in productionibus stromaticis pedunculiformibus solitaris 900-1090 × 60, pedunculis perithecialibus 500 × 60, parte sporogena 160 × 95, mycelio brunneo, 10-45 × 3, pilosulis, ceterum glabris; ascis irregula-

ribus, tenuiter tunicatis, octosporis, 20-27  $\approx$  7 ; sporidiis sphaeroj deis obscuris, unilocularibus, 4  $\mu$  diam.

Hab. in frondibus C a m p y l o n e u r i sp. (Polypodiaceae), Porto Rico, Amer. Centr.— Caracteribus peritheciorum sporidiorumque a coeteris speciebus distincta.

# Fam. 4. Lophiostomataceae Sacc.

#### Sect. 1. Phaeodidymae

SCHIZOSTOMA Ces. et De Not. - Syll. II p. 673, IX p. 1074, XI p. 382, XIV p. 702, XVI p. 650, XVII p. 887, XXII p. 548.

1. Schizostoma byssisedum Flag. et Chen. in J. E. Chenantais, Bull. 6933 Soc. Mycol. de Fr. XXXV, 1919, p. 125, fig. 19.— Peritheciis 7-800 μ, e subiculo fusco copioso emergentibus, basi hyphis cinctis, hemisphaericis, nigris; ostiolo crasso hysteriformi, rimâ labiis distinctis cinctâ percurso, subinde latiuscule hiante; ascis cylindraceis, apice rotundatis, stipitatis, paraphysibus numerosis furcatis obvallatis 8-sp., 100-120 × 9-10. Sporidiis didymis, arcte coarctatis, fusoideobiconicis, loculis cito secedentibus, dilute brunneis, primum 4-guttulatis dein eguttulatis, 22-25 × 5.

Hab. in ramis Carpini (Betulaceae), Rigny-sur-Arroux, Gallia (Flageolet).

2. Schizostoma applanata Petch, Ann. R. Bot. Gard. Peradeniya, v. 6934 VI, P. III, 1917, p. 231.— Peritheciis sparsis vel confertis, nigris, nitentibus, levibus, 1-1,5 mm. diam.; ostiolo applanato, ovali, medio 0,3 mm. crasso, transverso, saepe utrinque prominenti; ascis clavatis, apice obtusis, longe pedicellatis, sporis biseriatis, 126-136 × 10-11; parte sporifera 64-80 × 10-11; paraphysibus numerosis, linearibus, ramosis; sporis fusco-brunneis, fusiformibus, acutis, uniseptatis, parum constrictis, spurie triseptatis, 20-27 × 5-6.

Hab. in lignum emortuum, Hakgala, Ceylon.

#### Sect. 2. Hyalophragmiae

**LOPHIOTREMA** Sacc.— Syll. II p. 678, IX p. 1076, XIV p. 703, XVI p. 651, XVII p. 887, XXII p. 548.

1. Lophiotrema Hederae Sacc. — Sacc. Syll. II p. 678 — var. minor Rehm 6935 in Strasser, Ann. Mycol. IX, 1911, p. 84. — A typo differt peri-

theciis fere dimidio minoribus; ascis cylindraceis,  $80 \times 5.5,5$ ; sporis 22-28 \* 4.

Hab. in ramis emortuis Hederae Helix (Araliaceae), Gross Hollenstein a. d. Ybbs, Austriae Inf.

2. Lophiotrema Pteridis Gonz. Fragoso, Bull. Soc. Mycol. de Fr. XXXVI, 6936 1920, p. 105, fig. 1-2.— Peritheciis usque 175 μ diam., epiphyllis, sparsis, immersis, dein emergentibus, subsphaeroideis, rima recta marginata, vel leniter crenata, pertusis, quandoque junioribus astomis, contextu submembranaceo, obscure parenchymatico, atro-fuligineo; ascis paraphysatis, octosporis, clavatis, breviter stipitatis, usque 110 × 18; sporidiis irregulariter distichis, hyalinis, rectis curvulisve, 30-35 × 7,5-11, 3-septatis, loculis guttulis magnis et minutis praeditis, centro loculis extremis cum mediis canaliculis tenuibus connexis, non vel brevissime hyalinule appendiculatis.

Hab. in frondibus siccis Pteridis aquilinae (Filices), prope Estacion Alpina de Biologia, in montibus Guadarramae, Hispaniae.

3. Lophiotrema gentianaecolum Bubàk, III Beitr. Pilz. Montenegro, 6937 in Botanikai Közlemények 1915 p. (55). - Peritheciis dispersis vel laxe gregariis, oblongis, parum applanatis, rostello subelongato, compresso, fere toto immerso, rima longitudinali protuberante instructis, 300-400 µ longis, 200-700 µ latis, contextu atrofusco, ad rostellum obscuriore; ascis elongato-cylindraceis, 110-180 v 10-13, apice rotundatis, breve petiolatis, hyalinis, octosporis; paraphysibus crebris, filiformibus, supra ramosis; sporidiis subdistichis vel monostichis, fusiformibus, 19-28 \* 5-7, utrinque attenuatis, 3-septatis, ad septa constrictis, hyalinis.

Hab, ad caules emortuos Gentianae as clepiadeae (Gentianaceae), Savniki, Montenegro.

4. Lophiotrema Rickii Theissen, Ann. Mycol. 16., 1918, p. 186; fig. 1 d 6938 (in l. c. 15., 1917, p. 274 fig. d!). - Peritheciis immersis plerumque seriatis stromate destitutis, apice tantum parum expansis, prominulis, ampullaceis, 650 μ long. 350 μ latis, collo cylindraceo infra constrictulo apice usque 250 µ lato, ostiolo marginato; parietibus 14-18 μ cr. ex hyphis arcte contextis brunneis efformatis; ascis parietalibus copiose paraphysatis, J., poro destitutis, cylindraceoclavatis, infra angustatis 120-140 × 16-19 (parte sp. 110 μ), apice parum incrassatis, octosporis; sporidiis hyalinis, elongatis, sigmoideis, contortis, 6-7-locularibus, utrinque acutatis,  $40-50 \times 5$ .

Hab. in culmis Guaduae taquarae (Graminaceae), Sao Leopoldo, Brasilia.

5. Lophiotrema Bolivarii Gz. Fragoso, Bol. R. Soc. esp. Hist. nat. XVII 61 1917, p. 304.— Peritheciis sparsis v. breviter seriatis, primo tectis, basi infossis, majusculis, 600 μ diam., oblongo-depressis, sursum collapsis, subcarbonaceis, ostiolo minuto compresso; ascis clavatis, pedicellatis, 60-90 × 10-15, paraphysibus copiosis, superantibus, rectis v. subflexuosis; sporidiis irregulariter distichis hyalinis v. chlorino-hyalinis, claviformibus, 28-36 × 6-8, apicibus uno inflatarotundato, altero attenuato-obtuso, 5-7-septatis, loculis guttato-granulosis.

Hab. ad basim petiolorum Phoenicis canariensis (Palmae) cultae, pr. Malaga, Hispania (C. Bolivar).— Loph. phyllophilosimile sed diversum.

6. Lophiotrema andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6940 Buenos Aires XXIII (1912) p. 76.— Peritheciis gregariis, ligno decorticato infuscatoque insculptis, subhemisphaericis, 250-300 μ diam. ostiolo umbonato rimula longitudinali dehiscente ornatis, atris, glabris, carbonaceis; ascis e cylindraceo subclavulatis, breviuscule pedicellatis, 120-150 × 20, paraphysibus densiusculis, vix longioribus cinctis; sporidiis distichis, elongato-ellipsoideis, rectis vel leniter inaequilateris, utrinque rotundatis, 3-septatis, ad septum medium validiuscule constrictis, hyalinis, 30 × 12, loculis non vel grosse 1-guttulatis.

Hab. in ramulis emortuis C on daliae lineatae (Rhamnaceae), in dumetis Potrerillos prope Mendoza, Argentina.

7. Lophiotrema inaequale Chenantais, Bull. Soc. Mycol. de Fr. XXXIV, 6941 1918, p. 136. — Peritheciis 3-500 μ, dense gregariis, rugosis, hinc inde mycelii fusci hyphis instructis, epidermide tectis denique liberis, sphaeroideis, basi applanatis v. obtuse conicis, recte rima vix vel non marginata percursis, quandoque (junioribus) astomis; ascis paraphysibusque generis, sporidiis 6-guttulatis, 3-5-septatis, utrinque hyalino appendiculatis v. nudis.

Hab. in cortice Rubi-Idaei (Rosaceae), Termignon, vallée de l'Arc, Gallia (FLAGEOLET).

#### Sect. 3. Phaeophragmiae

- **LOPHIOSTOMA** Ces. et De Not. Syll. II p. 689, IX p. 1083, XI p. 383, XIV p. 702, XVII p. 886, XXII p. 550.
- 1. Lophiostoma quadrinucleatum Karst. -- Syll. II, p. 689 var. avel- 6942 lanaceum Sacc., Notae Mycol. XXIV p. 29 (Bull. Orto bot. Nap.

1918). — A typo dignoscitur ascis minoribus, nempe 60-70 × 10-12. sporidiis distichis v. interdum oblique monostichis, angusticribus, nempe 23-25 \* 5-6, fusoideis, initio crasse 2-guttatis, demum 3-septatis, ad septum medium leviter constrictis, fuligineis; peritheciis 0.5 mm. long., 0.2 mm. lat., ostiolo minuto, compresso.

Hab. in ligno emortuo atrato Coryli Avellanae (Betulaceae), Avellino, Ital. merid. - A Loph. rhopaloide differt sporidiis numquam subclavatis. Multae species exoticae quoque affines extant.

2. Lophiostoma brenckleanum Sacc., Notae Mycol. XXII (R. Acc. Pad. 6943 1917) p. 166. — Peritheciis subsparsis, emergenti-superficialibus. globulosis, carbonaceis, atris, glabris, 0,5-0,7 mm. diam.; ostiolo papillato-compresso, parum lato; ascis clavatis, breviter crasseque stipitatis, apice rotundatis, filiformi-paraphysatis, octosporis; sporidiis distichis cylindraceis, saepe curvulis, utrinque rotundatis,  $30.35 \times 6.7.5$ , brunneis, non guttatis, 6-7-septatis, ad septa constrictis.

Hab. in caule emortuo Chrysothamni graveolentis (Compositae), pr. Gren Ullin, Amer. bor. (O. A. STEVENS, comm. Brenckle). — Ostiolo papillato-compresso, non lato, sporidiis, 6-7 septatis, teretibus, utrinque rotundatis, septis longitudinalibus nullis a L. pseudomacrostomo, L. congregato L. Cephalanthi dignoscitur et ad gen. Melanomma vergit.

3. Lophiostoma caulinum (Fr.) Ces. et De N. — Sacc. Syll. II p. 697. — 6944 var. alpincola Rehm, Ann. Mycol. IV, 1911, p. 108. — Peritheeiis raro prominentibus in maculis nigris insidentibus; ascis 70-80 \* 10-12; sporis fusoideis utrinque acutatis 6-8-locularibus, loculis 3-4 latioribus, flavidis,  $20-27 \approx 5-6$ .

Hab. in caulibus putrescentibus Aconiti Napelli (Ranunculaceae), et Senecionis Fucksii (Compositae), Arlberg, Tirolia Algäu, Voralberg.

4. Lophiostoma Sieversiae Peck, N. Y. Stafe Mus. Bull. 167, 1912, p. 6945 44 (1913). -- Peritheciis minutis, 250 μ circ. latis, erumpentibus, atris; ascis oblongis, 150-280 × 50-70, typice octosporis; sporidiis oblongis vel subfusiformibus, 3-septatis, primum muco obvolutis,  $50-75 \approx 20-25$ .

Hab. in caulibus emortuis Sieversiae turbinatae (Ro-. saceae), Big Cottonwood canyon, Utah, Amer. bor. (A. O. GARRETT),

### Sect. 4. Phaeodictyae

PLATYSTOMUM Trev.—Syll. II p. 716, IX p. 1091, XIV p. 706, XVI p. 653 (sub Lophidium), XVII p. 889, XXII p. 553 (sub Platystomum).

1. Platystomum andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 69. Buenos Aire XXIII p. 77 (1912).— Peritheciis laxe gregariis ligno denudato et cinereo-atrato fere toto infossis, atris, levibus, 250-300 μ diam., ostiolo carbonaceo sat prominulo, acutiusculo, per aetatem saepe deciduo manifestis; ascis cylindraceis, breviter pedicellatis, 100-120 × 14-15, dense paraphysatis; sporidiis oblique monostichis, ellipsoideis, utrinque attenuato-rotundatis, transverse 3-5-longitudinaliter 1-septatis, ad septa constrictulis, fuligineis, 20-24 × 11-12.

Hab. in ramis dejectis putrescentibus Duvauae dependentis (Anacardiaceae), in lapidosis circa Potrerillos prope Mendoza, Argentina.

2. Platystomum phyllogenum Ch. E. Fairman, Mycologia 10., 1918, p. 6947 166.— Peritheciis primum immersis dein verticaliter erumpentibus v. quandoque lateraliter inclinatis, solitaris v. 2-3-gregariis ostiolo plus minus lato et compresso praeditis, parvis nigris; ascis cylindraceis breviter stipitatis apice rotundatis rectis v. curvis, 8-sporis, 100-112 × 12, paraphysibus numerosis filiformibus obvallatis; sporidiis oblique monostichis, ellipsoideis utrinque rotundatis, 3-septatis non constrictis, loculis 1 v. pluribus muriformibus, primum hyalinis dein fumosis, olivaceis v. pallide brunneis, 12-18 × 9-10.

Hab. in foliis (plerumque ad nervos) An astraphiae Northrupianae (Compositae), Pinar del Rio, Bay of Mariel, Cuba, Amer. bor. (N. L. BRITTON, C. S. GAGER).

3. Platystomum aerophilum Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6948
Buenos Aires XXIII (1912) p. 78. — Peritheciis sparsis vel laxe
gregariis, ligno denudato infuscatoque ad medium usque infossis,
atris, opacis, carbonaceis, 300-400 µ diam., ostiolo papillato valide
compresso coronatis; ascis cylindraceis, breviuscule pedicellatis,
150-200 × 12-20, paraphysibus crassiusculis dense guttulatis copiose
cinctis; sporidiis monostichis, elliptico-subfusoideis, transverse 7septatis, ad septa constrictis, medio validius, longitudinaliter interrupte 1-2-septatis, olivaceo-fuligineis, 26-30 × 9-10.

Hab. in ramis emortuis Chuquiraguae erinacea e (Compositae), in aridissimis circa Potrerillos prope Mendoza, Argentina.

4. Platystomum adeanum Rehm, Ann. Mycol. IX, 1911, p. 111. - Spo- 6949

ris transverse 11-septatis, oblique 1-2, 20-25 \* 8-9.

Hab. in caulibus Hyperici tetragoni (Guttiferae), Funtensee prope Berchtesgaden. — A Pl. gregario sporis magis transverse septatis diversa.

5. Platystomum Chamaeropsis Maire, Bull. Soc. Hist. Nat. Afrique du 6950 Nord, t. VI, 1914, p. 256, fig. 2 (Lophidium). — Peritheciis gregariis, subglobosis, 600-900 μ diam., basi immersis, apice in hostiolum breviter linearem attenuatis, laevibus v. subrugosis, atris, opacis; paraphysibus numerosis, filiformibus; ascis cylindraceis, basi attenuatis, 140-160 × 10; ascosporis 8, monostichis v. subdistichis, e melleo rufo-brunneis, ellipsoideis-subfusiformibus, medio constrictulis utrinque plerumque attenuatis obtusis, transverse 6-8 septatis, longitudinaliter v. oblique varie septatis laevibus, 23-28 × 7-10.

Hab. in petiolis putrescentibus Chamaeropis humilis L. (Palmae), Djebel Bou-Kournin Tunisia, Africae bor.

6. Platystomum Dulcamarae Kirschst. in Krypt. Fl. Brandenb. VII p. 6951 283 (1911). — Peritheciis sparsis vel gregariis, ligno rubro-tincto immersis, demum semiemersis, sphaeroideis, ostiolo minuto compresso praeditis, 300-400 μ diam.; excipulo tenui, coriaceo, atro, initio rubro-piloso dein calvo et granuloso-asperato; ascis clavatis, breviter pedicellatis, sursum rotundatis, octosporis, 135-160 × 15-18, paraphysibus filiformibus copiosis obvallatis; sporidiis sursum distichis, inferne monostichis, irregulariter fusoideis, saepius subtrigonis, plerumque uno latere applanatis et parum sigmoideo-curvatis, transverse 9-11-septatis, ad septa constrictulis, longitudinaliter incomplete 1-rarius 2-septatis, luteo-melleis, 24-28 × 7-8.

Hab. in caulibus siccis Solani Dulcamarae (Solanaceae), Rathenow, Germania.

#### Sect. 5. Scolecosporae

LOPHIONEMA Sace. - Syll. II p. 717, IX p. 1094, XXII p. 553.

1. Lophionema Chodati Lendner, Bull. Soc. bot. Genève, 1916 n. 4,5,6, 6952 p. 184 fig. 2-3. — Peritheciis sparsis depresso-sphaeroideis, 450  $\mu$  latis, 150  $\mu$  altis, in parenchymate immersis rima latiuscula dehiscentibus; ascis cylindraceis usque ad 90  $\approx$  12-15, breviter pedicellatis; paraphysibus numerosissimis, 1,5-2  $\mu$  cr., ascos non superantibus; sporidiis fasciculatis, filiformibus, multi-septatis, 80  $\mu$  longis, articulis 6-7  $\mu$  longis.

Hab. in strobilo Pini silvestris (Coniferae), Finge, Val-

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lesia. — A Lophodermio Pinastri omnino diversum. Ex icone asci videntur polyspori, probabiliter e facili fractura.

# Fam. 5. Hysteriaceae

#### Sect. 1. Hyalosporae

- HENRIQUESIA Pass. et Thüm. Syll. II p. 726, XVI p. 658, XVII p. 894.
- Henriquesia coccifera (Castagne) Arnaud, Bull. Soc. Mycol. Fr. 1914, 695
   p. 355-358, t. XVII-XVIII. Ita vocanda est Henriquesia lusitanica Passerini et Thüm., Sacc. Syll. II p. 726 seu Hysterium cocciferum Castagne, Cat. pl. Mars. p. 181 (1345) in Sylloge omissum.
- SCHIZOTHYRIOMA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, 6954
  p. 359.— Fungus subcuticularis.— Typ. gen. Schiz. Ptarmicae (Desm. ut Schizothyrium) v. Höhn.
- LOPHODERMELLA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, 685 p. 247 (nomem nudum). A gen. Hypodermella differt stratu cellulari subepidermico nec epidermico efformato. Huc pertinet Hypodermella sulcigena (Link) Tub. (cnfr. Fragmente zur Mykol. n. 1006, in Stzb. k. Ak. d. Wiss. Wien, 1917).

#### Sect. 2. Hyalodidymae

- **GLONIUM** Mühl. Syll. II p. 731, IX p. 1102, XI p. 386, XIV p. 711, XVI p. 661, XVII p. 896, XXII p. 559.
- 1. Glonium bambusinum Syd., Enum. Philipp. Fungi II, in Philipp. 6956 Journ. of Sci. VIII (1913) p. 496. Peritheciis sparsis vel seriatim dispositis, sessilibus, oblongis, 0,5-1 mm. longis, 0,25 mm. circ. latis, rima tenuissima percursis, atris, subcarbonaceis; ascis anguste clavatis, apice obtusis,  $44-52 \times 8-9$ , octosporis; paraphysibus filiformibus, hyalinis, tenuibus, 1  $\mu$  latis; sporidiis oblique monostichis vel distichis, ellipsoideis vel oblongis, medio 1-septatis, leniter constrictis, hyalinis,  $6-9 \times 3-4$ .

Hab. in culmis emortuis Bambusae (Graminaceae), Luzon, Prov. Bataan, ins. Philipp. (GRAFF).

2. Glonium mattirolianum Noelli, Nuovo Giorn. bot. it. v. XXIV, 1917 6957 n. 3, p. 193. — Peritheciis emergentibus, linearibus, elongatis vel

orbicularibus, subinde radiatim dispositis, vel sparsis, carbonaceis; ostiolo labiis dilute ocraceis; ascis ovoideo-ellipsoideis, raro cylindraceo-clavatis, octosporis, paraphysatis,  $58.72 \times 7.8$ ; paraphysibus  $84 \times 2$ , supra curvulis; sporidiis hyalinis oblongo-fusoideis, 1-septatis, medio constrictis,  $21 \times 2.4$ .

Hab. in foliis Alii narcissiflori (Liliaceae), in loco « Vallone Varisella » dicto, prope Fiano Valle Ceronda, Pedemontium, Italia bor.

3. Glonium lecideopsoideum Rehm in Ber. Bayer. Bot. Ges. XIII (1912), 6958 p. 105. — Ascomatibus in areis ligni pallescentibus sparsis, sessilibus, linearibus, rectis, utrinque obtusis, raro acutis, interdum stellatis, glabris, atris, rima longitudinali apertis et inter labia angusta discum luteolum ostendentibus, 200-300 × 100-150; ascis ovoideis, octosporis, 25-35 × 15-17, paraphysibus obtectis; sporidiis clavatis, utrinque leviter attenuatis, medio septatis et modice constrictis, hyalinis, in vetustate brunneolis, in quoque loculo guttulam oleosam amplam praebentibus.

Hab. in caulibus siceis decorticatis Dryadis octopetalae (Rosaceae), Valepp in Alpibus Bavariae. — Ascis ovoideis et paraphysibus circumdatis obtectisque ad gen. Lecideopsis transit.

PLEOGLONIS F. E. Clements, Genera of Fungi 1909, p. 56, 173.— Est 6959 Glonium polysporum. — Typus G. strobiligenum Desm.

TRYBLIDIS F. E. Clements, Genera of Fungi 1909, p. 65, 174.— Est 6960 Tryblidiopsis didymospora. — Typus T. pinastri Pers.

## Sect. 3. Hyalophragmiae

AULOGRAPHUM Lib. -- Syll. II p. 727, IX p. 1101, XI p. 386, XIV p. 711, XVI p. 659, XVII p. 895, XXII p. 558.

1. Aulographum proteacium Rodway, Pap. a. Proc. R. Soc. Tasmania 6961 f. Year 1917 (1918), p. 106. — Nigrum, oblongum, erumpens, anguste rimosum in maculis decoloratis circ. 0,5 mm. long. positum; ascis late obovatis, octosporis; sporidiis hyalinis uniseptatis, e oblongis obovatis, loculo superiore plerumque latiore, levibus, 14 × 6.

Hab. in foliis Cenarrhenes nitidae (Proteaceae), Trowatta, Tasmania.

GLONIELLA Sacc. — Syll. II p. 765, IX p. 1112, XI p. 388, XIV p. 717, XVI p. 666, XVII p. 903, XXII p. 565.

1. Gloniella trigona Rehm, Ann. Mycol. X, 1912, p. 395. — Ascomatibus in macula cinerella sparse sessilibus, linearibus, plerumque trigonis, interdum stellariformiter aggregatis, obtusis, atris, glabris, rima longitudinali percursis, labiis subdistantibus, 0,5-1 mm. long. 0,15-0,2 mm latis; ascis clavatis, crasse tunicatis, 70-75 × 15. octosporis; sporis acicularibus, utrinque acutatis, rectis, 15-septatis, hyalinis, 40 × 3-4, 3-stichis; paraphysibus ramosis, epithecium crassum, fuscum formantibus.

Hab. ad Pteridem aquilinam (Filices), Normandia, Gallia (VIAND MARAIS).

2. Gloniella normandina Rehm, Ann. Mycol. X, 1912, p. 394. — Asco-69 matibus in maculis cinereo-pallescentibus sessilibus, primitus sparsis dein gregariis, linearibus, utrinque obtusis, medio vix dilatatis, varie positis, rectis v. subcurvatulis, demum fere confluentibus, rima longitudinali percursis, labiis demum subdistantibus, atris, 0,5-1,5 mm. longis 0,1-0,15 mm. latis, parenchymatice contextis; ascis clavatis, apice rotundatis, crasse tunicatis, octosporis, 50-60 × 15; sporis fusoideis, utrinque acutatis, 7-septatis, hyalinis, 22-25 × 3-3,5, 3-stichis; paraphysibus ramosis, septatis, 1,5 μ apice incrassatis epithecium fuscum efformantibus.

Hab. ad stipitem Pteridis aquilinae (Filices), Normandia, Gallia (VIAND MARAIS).

3. Gloniella rubra F. L. Stevens, Bot. Gazette 69., 1920, p. 254, tab. 6964 XIV fig. 21.— Peritheciis oblongis, sparsis, numerosis, epiphyllis, nigris, 600-1500 × 180-250, rima longitudinali unica v. pluribus dehiscentibus; contentu peritheciorum rubro; ascis elongato-cylindraceis, praecipue ad apicem incurvato, octosporis, 85-92 × 10; paraphysibus numerosis filiformibus, elongatis; sporidiis inordinatis hyalinis v. levissime coloratis, 1-3-plerumque 3-septatis fusoideis 23-26 × 3.

Hab. in foliis Arthrostylidii multispicati (Graminaceae), El Alto de la Bandera, Porto Rico.— Gl. pusillae Sacc. proxima a qua praecipue differt peritheciis carbonaceis, contentu rubro, ascis curvis etc.

4. Gloniella caruniana Sacc., Nuovo Giorn. bot. it. N. S. v. XXII, 1915, 6965 p. 41.— Peritheciis lanceolatis, seriatis, nigricantibus, 240 × 60-70, demum latiuscule dehiscentibus, margine tenui integro; contextu ex cellulis globoso-polygonis, 14-16 μ diam., atrocyaneis formato; ascis dense stipatis oblongo-clavatis, subsessilibus, 35-40 × 14, paraphysibus sursum obscure ramulosis et epithecium atro-cyaneum

formantibus cinctis, tetrasporis (an et octosporis?); sporidiis breviter fusoideis, utrinque obtusulis,  $15\cdot 16 \approx 7$ , 3-septatis, non constrictis, hyalinis.

Hab. in ramulis emortuis Rosmarini officinalis (Labiatae), Boschetto, Ins. Melita. — A Gloniella minima, cui affinis, differt peritheciis multo brevioribus, et paraphysibus copiosis, apice ramulosis et atro-cyaneo-grumosis.

5. Gloniella caucasica Rehm in Monit. Jard. Bot. Tiflis XXV (1912) 69 p. 12. — Peritheciis gregariis, in epidermide dilute fuscidula parallele positis circa axin ramuli, ellipsoideis, utrinque subacutatis, atris, glabris, rima longitudinali percursis, labiis vix distantibus, neque discum hyalinum perspicue denudantibus, 1-1,5 mm. longis, 0,3-0,5 mm. latis; ascis clavatis apice rotundatis, octosporis, 70-75  $\times$  15-20, paraphysibus filiformibus, hyalinis, 1  $\mu$  cr. obvallatis; sporidiis distichis, ellipsoideis, utrinque obtusis, primitus strato mucoso tenui obtectis et medio septatis denique 3-septatis, cellulis mediis latioribus, ample 1-guttatis, ad septa constrictis, flavidulis,  $20\text{-}25 \times 7$ .

Hab. in caulibus Rubi sp. (Rosaceae), Abchazia in Caucaso (Woronow).

- LEPTOPELTELLA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 358 (nomen nudum).—Fructificatio subcuticularis parietibus propriis donata.
- Leptopeltella perexigua (Speg.) v. Höhn., l. c., Gloniella perexigua (Speg.) 6967
   Sacc.— Ascis cylindraceo-clavatis, sessilibus; sporidiis conglobatis hyalinis, quadrilocularibus, ad septa fortiter constrictis, loculo secundo parum majori, 12-16 × 4-5.

Hab. in caulibus emortuis Senecionis nemorensis (Compositae), Austria.

2. Leptopeltella pinophylla v. Höhn., Ber. deutsch. bot. Ges. 35., 1917, 6968 p. 249; Ann. Mycol. 15., 1917, p. 305. — Gloniella pinophylla v. Höhnel in Strasser, Verh. zool. bot. Ges. Wien 69., 1919, p. 365. — Peritheciis sparsis quandoque geminatis subcuticularibus, rotundatis, nigris, 70-130  $\mu$  latis infra depressis, supra prominentibus ostiolo 12  $\mu$  lato rotundato nigro-marginato praeditis; ascis clavatis, medio inflatis supra cylindraceis, sessilibus,  $32 \times 7.5$ , octosporis; paraphysibus praesentibus sed parum distinctis; sporidiis distichis, hyalinis elongato-fusoideis v. clavulatis, utrinque attenuato-rotundatis, eguttulatis, aequaliter bilocularibus,  $10 \times 2.5$ .

Hab. in foliis Pini austriacae (Coniferae), Sonntagsberge Austria inf. (STRASSER).

#### MERRILLIOPELTIS P. Henn. - Syll, XXII p. 565.

1. Merrilliopeltis parvula Sydow, Philipp. Journ. of Sc., v. 9., Sect. C, 69 n. 2, 1914, p. 164. — Peritheciis sparsis vel saepius laxe seriatim ordinatis, rotundatis, minutis, 0,12-0,18 mm. diam., subinde fere confluentibus et stromatice positis, epidermide elevata et subinde clypeiformiter denigrata obtectis, lenticularibus, ostiolo globoso minimo prominente; ascis cylindraceis, teneris, 100-130 μ longis, 8-10 μ latis, octosporis; paraphysibus filiformibus, perpaucis; sporidiis distichis vel fere distichis, fusiformibus, rectis, rarius leniter curvatis, medio 1-septatis, non constrictis utroque apice longe acutissimis, hyalinis, 45-54 μ longis 3,5-4,5 μ latis.

Hab. in foliis (petiolis) Oraniae sp. (Palmae), Palawan Lake Manguao, Ins. Philipp. (MERRILL).

# Sect. 4. Phaeophragmiae

**HYSTERIUM** Tode, em. – Syll. II p. 743, IX p. 1108, XI p. 387, XIV p. 715, XVI p. 664, XVII p. 907, XXII p. 567.

1. Hysterium standleyanum Ch. E. Fairman, Mycologia 10., 1918, p. 6970 252.— Peritheciis sparsis raro 2-3 seriatis erumpenti-superficialibus anguste ellipsoideis, margine arcte conniventi apice tantum parum apertis, nigris 0,5-2 mm. long.; ascis clavato-cylindraceis apice rotundatis breviter stipitatis octosporis, 70-75 × 10; sporidiis subdistichis, oblongo-fusoideis rectis v. curvulis utrinque subobtusis, 4-7 septatis non constrictis, loculis superioribus tertium v. quartum globosis, incrassatis, omnibus juventute guttulatis, primum hyalinis dein flavis v. brunneo-rubridis, 20-23 × 3,33-4,5.

Hab. in ramulis vetustis ? Quercus Fendleri (Cupuliferae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

2. Hysterium gahianum Rodway, Pap. a Proc. R. Soc. Tasmania f. 6971 Year 1917 (1918), p. 106. — Nigrum, lineare, erumpens raro ultra 1 mm. long., anguste rimosum; ascis clavatis octosporis; sporidis e fusoideis linearibus 36 × 4-5, 6-9-septatis, levibus, maturis obscure brunneis.

Hab. in foliis dejectis Gahniae psittacorum (Cyperaceae), Hobart, Tasmania.

3. Hysterium heveanum Sacc., Notae Mycol. XXIV p. 15 (Bull. Orto 6972 bot. Napoli, 1918). - Peritheciis dense gregariis, undique versis, saepe tortis, oblongis utrinque obtusis, carbonaceis, nigris, 1,5-2 mm. longis, 0,7 mm. cr., levibus, rima longitudinali latiuscula dehiscentibus; ascis cylindricis breviter stipitatis, filiformi-paraphysatis, apice rotundatis, octosporis, 140-150 × 9-10; sporidiis monostichis, oblongis, saepe inaequilateris, utrinque rotundatis, 25 × 8, 3-septatis, ad septa non v. vix constrictis, 4-guttulatis, homogenee brunneis.

Hab, in ramis corticatis emortuis Heyeae brasiliensis (Euphorbiaceae) cultae, Singapore (BAKER). - Peraffine Hyst. pulicari sed peritheciis non striatis et sporidiis uniformiter coloratis videtur satis distinctum.

4. Hysterium anceps Sacc., Notae Myc. XX in Nuovo Giorn. bot. it. 6973 N. S. v. 23., 1916, p. 207. — Peritheciis laxe gregariis, primo epidermide velatis, mox liberis et superficialibus, navicularibus, utrinque acutis, rectis rarius curvulis, carbonaceis, nigris, subopacis, 1-1,3 mm. longis, 0,4 mm. cr., adultis sub vitro fortiori tenuissime transverse striolatis, rima angusta dehiscentibus, labiis obtusis; ascis cylindraceis breviter pedicellatis, apice rotundatis 140-160 \* 11-12, paraphysibus filiformibus copiosis et densis, hyalinis, asco longioribus obvallatis, octosporis; sporidiis oblique monostichis breviter fusoideis, subrectis, 24-26 × 8-8,5, triseptatis, non (v. vix medio) constrictis, totis opace fuligineis.

Hab. ad ramulos emortuos Strebli asperi (Moraceae), Los Baños, Ins. Philipp. — Ob perithecia tenuissime striolata ad Rhytidhysterium nutat.

5. Hysterium andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. Hist. 6974 Nat. XXIII (1912) p. 85. — Peritheciis matrice cinerascenti-infuscata laxe gregariis, erumpenti-superficialibus, longitudinalibus, utrinque acutis, subcarbonaceis, 0,5-1,5 mm. longis, 250-300 µ latis, labiis non vel vix tumidulis, disco atro, contextu indistincto; ascis subcylindraceis, breviter pedicellatis, jodi ope leniter caerulescentibus, parce paraphysatis, 100-120 \* 18-20; sporidiis distichis, ellipsoideo-elongatis, rectis vel inaequilateris, utrinque acutiuscule rotundatis, typice 3-septatis, sed in eodem perithecio et saepe in eodem asco nonnullis continuis vel 1-4-5-septatis, ad septa constrictulis, primo pellucidis serius fuligineis subopacis, 26-30 × 10-13.

Hab, in truncis ramisque decorticatis et induratis Tricyclae spinosae (Nyctaginaceae), et Prosopidis alpataci (Le-

guminosae), in montanis circa Potrerillos prope Mendoza, Argentina.

6. Hysterium cubense Peck, N. Y. State Mus. Bull. 157 (1911) p. 48 6 et 111 (1912). — Peritheciis gregariis vel subcaespitosis, oblongo-ellipsoideis, rectis, curvis vel rare flexnosis, primum erumpentibus, demum superficialibus, epidermide dilapsa, levibus 1-2 mm. longis, 0,5 mm. latis et altis, atris; ascis cylindraceis, 160-200 × 15-20; sporidiis monostichis, oblongis vel ellipsoideis, 3-septatis, fuscis, 30-40 × 12-16.

Hab. in ramis emortuis, ad terram, in ins. Cuba (C. F. BAKER).—Affine H. pulicari sed notis variis satis distinctum.

**TRYBLIDIELLA** Sace. — Syll. II p. 757, IX p. 1110, XI p. 388, XVI p. 665, XVII p. 908, XXII p. 569.

1. Tryblidiella olivetorum Sacc., Nuovo Giorn. bot. it. N. S. v. XXII, 671 1915, p. 42.— Peritheciis gregariis erumpentibus, globoso-ellipsoideis (e fronte), totis nigricantibus, 306 μ longis, initio rimosis, dein magis apertis subscutellatis, margine crassiusculo, contextu excipuli irregulariter celluloso, fuligineo; ascis crasse clavatis, apice obtusis, subsessilibus, 80-85 × 22-24, octosporis, paraphysibus acicularibus, parce septulatis, apice obtusulis obvallatis; sporidis oblongo-ellipsoideis, 3 septatis, ad septa constrictis utrinque rotundatis, diu strato tenui hyalino obvolutis, 4-guttulatis, 28-30 × 11, 5-12, initio ochraceis demum atro-fuligineis.

Hab. in ramis corticatis, emortuis Oleae europaeae (Oleaceae), Addolorata, Ins. Melita.

2. Tryblidiella Assiminae Car. Gatto et Sacc., Nuovo Giorn. Bot. it. N. S. 6977 v. XXII, 1915, p.42.— Peritheciis gregariis erumpentibus ex anguloso orbicularibus (e fronte), depressis, 350  $\mu$  latis, 170  $\mu$  altis, rimose v. triangulato-dehiscentibus, disco plano olivaceo-fusco, margine obtuso parum emergente nigro, intus farctis olivaceis; ascis clavatis v. subfusoideis, crassis, 70-100  $\approx$  20-35, apice rotundatis breviter crasseque stipitatis, octosporis, paraphysibus filiformibus, sursum levissime incrassatis, ibique 3-4  $\mu$  cr., flavidulis, continuis; epithecio olivaceo-fusco; sporidiis tereti-oblongis rectis, utrinque rotundatis, initio 1-septatis, 4-guttulatis granulosisque, hyalinis, 45  $\approx$  25, demum 3-septatis valdeque constrictis, ex atro-olivaceo fuligineis, eguttatis,  $40\text{-}42 \approx 16$ .

Hab. in ramis corticatis, emortuis Tamaricis gallicae (Tamaricaceae), Addolorata, Ins. Melita. — Pulchella species, in honorem nob. Dominae ASSIMINAE CARUANA-GATTO nuncupata.

3. Tryblidiella biconica Rodway, Pap. a. Proc. R. Soc. Tasmania f. 6978 Year 1917 (1918), p. 107.— Nigra, carnosa, dense caespitosa, ascomatibus mutua pressione contortis, singulis 1-2 mm. diam.; ascis clavatis, octosporis; sporidiis hyalinis, levibus, uniseptatis, apice subacutis, 17 × 7.

Hab. ad corticem Phyllocladi rhomboidalis (Taxaceae), Mt. Wellington, Tasmania.

Tryblidiella rufula (Spreng.) Sacc. — Syll. II p. 757 — fm. glabrata 6979
 Rehm, Ascomyc. Philipp. IV, Leaflets of Philipp. Botany, VI (1914)
 p. 1947. — Absque diagnosi.

Hab. ad ramulum emortuum, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. Reyes).

#### HYSTEROPATELLA Rehm. - Syll. XIV p. 27, XXII p. 57.

1. Hysteropatella conformis Rehm, Ber. Bayer. Bot. Gesell. XIII (1912) 6980 p. 104. — Ascomatibus gregariis, sessilibus, linearibus, obtusis, rectis, raro curvulis, rarissime trigonis, rima angustissima apertis, atris, 0,2-0,3 \* 0,1 mm., non carbonaceis; ascis ellipsoideo-clavatis, sessilibus, 40-45 \* 9-10, octosporis; paraphysibus filiformibus, apice incrassatis et epithecium brunneum efformantibus; sporidiis 2-3-stichis, fusoideis, haud acutis, rectis, medio paululo constrictis, 6-locularibus, hyalinis (semper ?), 15-18 \* 3-4.

Hab. in ramulis Ericae carneae (Ericaceae), Reiteralpe in alpinis Salisburgiae.

2. Hysteropatella minor (Cooke) Rehm, Ann. Mycol. X, 1912, p. 396.— 6981 Ita vocanda Tryblidiella minor (Cooke) Sacc., Syll. II p. 759.

#### Sect. 5. Hyalodictyae

**GLONIOPSIS** De Not.— Syll. II p. 772, IX p. 1116, XIV p. 717, XVII p. 909.

1. Gloniopsis somala Baccarini, Eumyc. Somalia it., in « Missione Stefanini Paoli » Firenze 1916, p. 197. — Peritheciis atris, linearibus mm. 2-3 longis 0,3-0,5 latis, parallele subgregariis in ligno dealbato insidentibus, rima latiuscula dehiscentibus, labiis tumidulis e contextu fere omnino proprio formatis, interne tenuibus hyalinis, ascis bi-tetra et esasporis, 87 × 16, sporidiis hyalinis muriformibus transverse 8-9 septatis 30-14, ad medium non constrictis, primitus hyalinis denique castaneis, paraphysibus filiformibus ascos obtegentibus.

Hab. in silvis ad ripas Fl. Giubae prope Salagle et Bur Egherta, Somalia it., Africae trop. (PAOLI).

- HAPLOPHYSE Theiss., Ann. Mycol. 14., 1916, p. 267. Perithecia subcuticularia, carbonacea, supra cum clypeo stromatico subcuti. culari connata, demum rimose v. stellatim dehiscentia. Hypothecium atrum. Asci globulosi, crasse tunicati sessiles, octospori, Paraphyses simplices hyalinae, epithecium non formantes. Sporidia hyalina, septato-muriformia, oblonga. Quoad sporidia Gloniopsis et Hysteropsi accedit, sed fabrica perithecii et paraphysium satis diversa.
- 1. Haplophyse oahuensis Theiss., l. c. fig. 2 A.— Epiphylla, in maculis 2-3 mm. latis atroviolaceis inserta; peritheciis basi applanatis convexulis rimose v. stellatim dehiscentibus, 180-240 μ lat. v. 250 × 160-180, clypeo 16-24 μ cr.; ascis paucis globosis, 45 μ diam, subsessilibus; paraphysibus stipatis filiformibus asco longioribus; sporidiis irregulariter dispositis, oblongis, 22-24 × 8-9, plerumque 3-septato-muriformibus, hyalinis.

Hab. in foliis Coprosmatis longifolii (Rubiaceae) Oahu in Ins. Hawaii.

#### Sect. 6. Phaeodictyae

HYSTEROGRAPHIUM Corda.— Syll. II p. 776, IX p. 1119, XI p. 389, XIV p. 718, XVI p. 668, XVII p. 912, XXII p. 573.

1. Hysterographium acerinum Peck in N. Y. State Mus. Bull. 167, 1912, 698 p. 43 (1913). — Peritheciis superficialibus, subscriatim dispositis, late ellipsoideis vel oblongis, levibus, atris, 1-3 mm. longis, 0,5-1 mm. latis; ascis subcylindraceis, 120-170  $\mu$  longis; sporidiis oblongis vel subfusiformibus, 7-10-septatis, muriformibus, 35-50  $\approx$  12-16.

Hab. in ligno decorticato Aceris glabri (Aceraceae), Boulder, Col., Amer. bor. (E. BARTHOLOMEW).

2. Hysterographium andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 6985 Buenos Aires XXIII (1912) p. 85.— Peritheciis in ligno decorticato fuscescente laxe gregariis, erumpenti superficialibus, longitudinalibus, 0,5-1,5 mm. longis, 200-300 μ latis, utrinque acutiusculis, carbonaceis, latiuscule hiantibus, disco sanguineo, labiis acutiusculis, contextu indistincto; ascis cylindraceis, basi breviter cuneato-pedicellatis 4-8-sporis, 110-180 × 14-20, paraphysibus filiformibus apice clathrato-ramulosis, coalescentibus atque rubris obvallatis; spori-

diis ellipsoideis, oblique monostichis, typice transverse 5-septatis, raro 3-6-septatis, ad septa leniter constrictis, medio validius, longitudinaliter 1-, raro 2-septatis, obscure fuligineis,  $18-26 \approx 8-12$ . — Jodi ope ascorum membrana perdilute caerulescit.

Hab. in ramis et truncis aridis Tricyclae spinosae (Nyctaginaceae), et Condaliae lineatae (Rhamnaceae), in dumetis Potrerillos prope Mendoza, Argentina.

3. Hysterographium praeandinum Speg., Mycet. Argent. VI, Anal. Mus. 6986 Nac. Buenos Aires XXIII (1912) p. 87. — Peritheciis sparsis vel gregariis, ligno denudato infuscatoque erumpenti superficialibus, elongatis, 0,5-1,5 mm. longis, 250 μ latis, subcarbonaceis, atris, opacis, rima latiuscula dehiscentibus, disco sordide atro, contextu indistincto; ascis cylindraceis, breviter attenuato-pedicellatis, 100-120 × 12-14, jodi ope leniter caerulescentibus, paraphysibus filiformibus, simplicibus, densiuscule obvallatis; sporidiis ellipsoideis, rectis vel vix subinaequilateris, utrinque rotundatis, obscure olivaceis, 18-20 × 8-10, transverse 3-(rarius 4-5-) septatis, medio validius constrictulis, loculis medianis, supero saepe majore, longitudinaliter divisis.

Hab. in caudicibus ramisque deiectis aridis Bulnesiae retamo (Zygophyllaceae), in montanis Camperito, Sierra Pié de Palo et Tricyclae spinosae (Nyctaginaceae), in rupestribus Potrerillos prope Mendoza, Argentina.

4. Hysterographium cuyanum Speg., Mycet. Argent. VI, Anal. Mus. 6987 Nac. Buenos Aires XXIII (1912) p. 86. — Peritheciis omnino superficialibus, gregariis, elongatis, superne planis, 500-1000 × 200-250, atris, nitidis, carbonaceis, rima angusta, labiis obtusiusculis dehiscentibus, inferne eximie coarctatis obsoleteque substipitatis, contextu indistincto, disco atro; ascis cylindraceis, breviter cuneatopedicellatis, 120 × 17-18, paraphysibus filiformibus supra medium bis vel ter furcatis non coalescentibus copiose obvallatis; sporidiis distichis, subclavulatis, leniter inaequilateris vel subcurvulis, transverse 7-(rarius 5-vel 9-) septatis, constrictulis, septo longitu. dinali plerumque unico, pallide fuligineis, 28-32 × 12-14.

Hab. in ligno denudato induratoque truncorum Bulnesiae retamo (Zygophyllaceae), in montanis Camperito, Sierra Pié de Palo, Argentina.— Ab H. australe Speg. peritheciis superficialibus nitidulis et sporidiis densius septatis distinctum.

5. Hysterographium Vanderystii Bres., Champ. Congo belge, Bull. Jard. 6988
Bot. Bruxelles IV, 1 (1913) p. 9.— Peritheciis superficialibus dense

gregariis, raro sparsis, nigris, carbonaceis, oblongo-subnavicularibus, rectis vel raro flexuosis, rima longitudinali percursis, 0,5-1,5 mm. longis,  $^1/_5$  mm. crassis; ascis cylindraceis, breviter stipitatis, 100-110  $\times$  10-12, paraphysibus copiosis conglutinatis ascos 15-20  $\upmu$  superantibus; sporidiis monostichis vel subdistichis, fuligineo-olivaceis, transverse 3 (rarissime 4-)-septatis, ad septa demum constrictis, loculo uno vel etiam altero medianis longitudinaliter septatis, 13-15  $\times$  6-7.

Hab. in lignis vetustis, Kisantu, Congo (H. VANDERYST).

- POLHYSTERIUM Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires, XXIII (1912) p. 87.— Etym. polys et Hysterium.— Perithecia superficialia, carbonacea, rimis pluribus subparallelis vel subconcentricis dehiscentia. Asci octospori paraphysati. Sporidia pluriseptato-muriformia, olivacea.— Est Hysterographium compositum.
- 1. Polhysterium cuyanum Speg., loc. cit., e. ic. Peritheciis plus minusve dense gregariis, superficialibus, atris, glabris, opacis, superne depressis, 1-2 mm. diam., rimis 2-3 concentricis vel subparallelis dehiscentibus, labiis modice hiantibus, contexta carbonaceo; ascis cylindraceo-clavatis, brevissime pedicellatis, 75-100 × 12-20, paraphysibus filiformibus parum longioribus cinctis; sporidiis monovel distichis, rectis vel leniter inaequilateris, subellipsoideis, olivaceis, 16-22 × 6-9, transverse 3-5-septato-constrictis, loculis centralibus septo longitudinali divisis.

Hab. in ligno denudato induratoque truncorum Prosopidis nigrae (Leguminosae), Huillapima prope Catamarca, P. alpataci nec non Condaliae lineatae (Rhamnaceae), circa Potrerillos prope Mendoza, Argentina.

#### GRAPHYLLIUM Clem. - Syll. XVI p. 1145, XVII p. 913.

1. Graphyllium dakotense Rehm, Ann. Mycol. XIII, 1915, p. 3. — Pe. 6890 rithecia gregaria, epidermidi innata, linearia, recta, utrinque obtusa, longitudinaliter in culmo posita, glabra, nigra, rima angustissima percursa, 0,5-1,5 mm. longa, interdum -5 mm. longe aggregata, 0,1 mm. lata, parenchymatice nigro-fuscidule contexta, membranacea; asci oblongo-clavati, apice rotundati, sessiles, 70-85 × 12, 8-spori; sporae ovoideae, transverse 3-, modo in cellulis mediis longitudinaliter 1-septatae, flavo-fuscae, 15-18 × 6-7, distichae; paraphyses nullae.

Hab. in culmis Andropogonis scoparii (Graminaceae),

- N. Dakota et ad culmos Phragmitidis communis (Graminaceae), Wiedmer Lake, N. Dakota, America bor. (Brenckle). A Gr. graminis (= Hysterangium Ell. et Ev.) et Gr. Chloës Cl. sporarum caracteribus diversa.
- 2. Graphyllium Chloës Clem. Syll. XVII p. 913 var. lunci Peck 6991 in N. Y. State Mus. Bull. 157 (1911) p. 48 et 110 (1912). A typo differt sporis ad septa non constrictis et paraphysibus obsoletis vel carentibus.

Hab. in culmis Junci balticae (Juncaceae), Scotia, Nebraska, Amer. bor. (J. M. BATES).

#### Sect. 7. Scolecosporae

HYPODERMA DC. — Syll. II p. 784, IX p. 1113, XI p. 389, XIV p. 719, XVI p. 669, XXII p. 575.

Hypoderma Laminariae Sutherlaud in Trans. Brit. Myc. Soc. V, pt. I, 6992 1914, p. 153 (1915). — Peritheciis in areis circularibus, gregariis, immersis, ellipsoideo-elongatis, apicibus acutis, 150-220 μ longis, 130 μ circ. latis, scissuris longis apertis, parte superiore atris, carbonaceis, basi submembranaceis, pallide brunneis; ascis clavatis apice attenuatis, octosporis, 69-90 × 12,5-14; paraphysibus filiformibus, apice leviter inflexis vel dilatatis; sporidiis distichis, fusiformibus vel ovoideis, hyalinis, 1-septatis, leniter constrictis, flavescentibus, 20-25 × 5-7,5.

Hab. in thallo vivo Laminariae saccharinae (Algae), Orkney, Scotia.

2. Hypoderma deformans J. R. Weir, Journ. Agr. Res. VI (1916) p. 277, 6993 c. ic. et tab. — Ascomatibus atris, nitentibus, 10 mm. circ. longis et 1 mm. latis, haud raro longe seriatis, rima longitudinali mediana apertis; ascis fusoideis, subsessilibus,  $160\text{-}200 \approx 26\text{-}43$  (typice 170-185  $\approx 27\text{-}29$ ); paraphysibus copiosis, filiformibus, apice leniter incrassatis vel curvatis; sporidiis parallele vel oblique in asco positis, utplurimum leniter curvatis, aequaliter latis, cylindricis, apice obtusis, maturis medio 1-septatis, e hyalino dilute olivaceis, octonis,  $90\text{-}130 \approx 6\text{-}10$ , saepius  $108\text{-}117 \approx 7,5\text{-}8,5$ ; pycnidiis intermixtis 5 mm. longis, sporulis elongatis, angustis, interdum leniter curvatis, hyalinis, continuis,  $8 \approx 1$ .

Hab. in acubus vivis Pini ponderosae (Coniferae), Sumpter, Oreg., Amer. bor.

3. Hypoderma tenellum Sacc., Notae Mycol. XX, in Nuovo Giorn. bot. 6994

it. N. S., v. 23., 1916, p. 189.— Peritheciis dense gregariis, oblongis, saepe irregularibus 0,5-1 mm. long., 0,2 mm. lat., membranaceis, atro-nitidis, demum longitrorsum rimosis, applanatis, siccis plicatulis, contextu tenuiter parenchymatico, cellulis cuboideis, rimam versus verticaliter parallelis, dilute fuligineis, prope rimam densicibus opacis; hypothecio tenui; ascis tereti-clavatis  $55-60 \times 6-7$ , rarius brevioribus  $25 \times 7$ , indistincte paraphysatis; sporidiis distichis, oblongis v. oblongo-clavulatis  $8-10 \times 2-2,5$ , hyalinis, saepius leviter curvis.

Hab. in caule emortuo Thalictri dioici (Ranunculaceae), Bennets, N. Y., Amer. bor. — Habitus fere Hypod. communis sed minus et ascis et sporidiis multo minoribus. Videtur adesse in eodem caule forma longiasca et breviasca.

- LOPHODERMIUM Chev.— Syll. II p. 791, IX p. 1124, XI p. 390, XIV p. 720, XVI p. 670, XVII p. 913, XXII p. 579.
- 1. Lophodermium cedrinum Maire, Bull. H. N. de l'Afr. du Nord, 1917, 695 p. 174. Peritheciis subcarbonaceis ellipticis v. oblongis, 0,5-1 × 0,3-0.5 mm., cuticula tectis, convexis, dimidiatis, nigris, nitidulis, rima longit. dehiscentibus, margine acutiusculo, pilis hyalinis dense conglutinatis vestito; hymenio udo griseo-pallido; ascis 8-sporis, longe clavatis, apice obtusis, tenui-tunicatis, 225-250 × 15-18, filiformi-paraphysatis, paraphysibus 1 μ cr., saepe apice incurvis v. circinatis et 2-2,5 μ incrassatis; sporidiis filiformibus, hyalinis, apice vix incrassato rotundatis, basi acutulis, guttulis oleosis farctis, rectis curvulisve, saepe sub asci apice spiraliter contortis, ascum totum fere implentibus, 110-165 × 2-2,5. Status pycnidicus Labrella cedrina Dur. et Mont. Syll. III p. 648: sporulis 4-6 × 0,7-1; sporophoris 10-12 × 0,8-1.

Hab. in foliis seu acubus, lineis nigris ex partibus delapsis, C e d ri a tlantica e (Coniferae), in M. Atlas de Blida, Mauretania, Africa bor.

2. Lophodermium Chamaecyparissi Shirai et Hara in Bot. Magaz. Tokyo 6996 XXV (1911) p. 69, tab. 2 fig. 1-2. — Peritheciis singulis vel aggregatis, subepidermicis, pustulas minutas atras elevatulas formantibus, ambitu ellipticis vel rotundatis, 500-800 × 300-500, 300-350 μ altis, longitudinaliter dehiscentibus; ascis cylindraceis vel clavatis, apice obtuse tenuatis, octosporis, 50-60 × 5-5,5, paraphysibus filiformibus, apice vix inflatulis ibique simplicibus vel ramosis; sporidiis fasciculatis, filiformibus vel acicularibus, unicellularibus, 40-

 $50 \approx 0.5 - 0.7$ , hyalinis.

. Hab. in foliis adhuc vivis Chamaecyparis obtusae (Coniferae), Prov. Mino, Kawauye-mura, Japonia (K. HARA).

3. Lophodermium gilvum Rostrup, Tids. Skovbrug. VI p. 283 (1883) et 6997 Lind Fung. Dan. Rostr. p. 148 (1913). — Peritheciis sparsis epiphyllis, innato-immersis, oblongatis vel linearibus, epidermide tectis, gilvidis; ascis numerosis, sessilibus, cylindraceo-clavatis, 75-80  $\times$  10-12; paraphysibus filiformibus, numerosis, apice flexuosis, 80-85  $\mu$  longis; sporidiis octonis filiformibus, hyalinis, multiguttulatis, 70  $\times$  2.

Hab. in foliis Pini anstriacae (Coniferae), in Dania.

4. Lophodermium amplum Davis, Parasit Fungi Wisconsin, V, Trans. 6998 Wisc. Ac. of Sc. etc. XIX, 1919, P. II, p. 695. — Maculis sordidis v. areis foliorum terminalibus; peritheciis amphigenis prominentibus, nigris, ellipsoideis, 0,5-1 mm. long.; ascis e cylindraceis clavato-cylindraceis, apice angustatis quandoque curvis 90-165 × 18-30; sporis muco immersis, hyalinis, continuis, clavato cylindraceis, basi attenuatis, raro cylindraceo-fusoideis, 30-72 × 3-6; paraphysibus numerosis, filiformibus, ascos parum superantibus.

Hab. in foliis Pini Banksianae (Coniferae), Wisconsin pluribus locis, Amer. bor. — Loph. pinastri proximum sed differt quia parasiticum etc.

5. Lophodermium rotundatum Sydow, Annales Mycologici XII, 1914, 6999 p. 201. — Peritheciis hypophyllis, sparsis, innatis, sine maculis, convexo-prominulis, rotundatis v. breviter ellipticis, 0,15-0,35 mm. long., 0,15-0,25 mm. latis, atris, rima tenuissima dehiscentibus; ascis cylindraceis, apice obtusis, sessilibus, 65-85 : 4-5, octosporis, tenuissime paraphysatis; sporidiis parallele stipatis, filiformibus, rectis, multiguttulatis, hyalinis, 60-80 \* 0,75.

Hab. in foliis emortuis Dillenia e sp. (Dillenia ceae), Los Baños prov. Laguna, ins. Philippinens (C. F. Baker). — A L. Mangiferae Koord. et L. Canangae P. Henn. et E. Nym. peritheciis minoribus, rotundatis v. breviter ellipticis diversum.

6. Lophodermium maculare (Fr.) De Not. — Syll. II p. 791 — fm. Arc- 7000 tostaphyli Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 116.— Ascis ad  $120 \times 8$ ; sporidiis ad  $70 \times 2$  sed magnitudine valde ludibundis.

Hab. in foliis Arctostaphyli alpinae (Ericaceae), in Bavaria et Tirolia.

7. Lophodermium Aleuritis Rehm, Ascomyc. Philipp. V, et VII Leaflets 7001 of Philipp. Botany, VI (1914) p. 2232 et VIII, 1916, p. 2925. —

Peritheciis maculis epiphyllis discoideis, dilute brunneo-exsiccatis. 5-8 mm. latis, mox confluentibus gregarie innatis, orbicularibus. mox elongato ellipsoideis, utrinque obtusis, atris, 0,5 mm. usque longis, 3 mm. latis, medio rima longitudinali tenuissima percursis. parenchymatice contextis; hymenio 40 µ alto; ascis cylindraceis. 70 × 5, octosporis; sporidiis filiformibus, rectis, hyalinis, 50 × 0.5. parallelis; paraphysibus filiformibus.

Hab. in foliis emortuis Aleuritis moluccanae (Euphorbiaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES et C. F. BAKER).

8. Lophodermium Sacchari Lyon, Hawaiian Pl. Rec., 1913, 9., p. 601 70 Caum, Bull. Exp. St. Hawai, Sug. Planter's Ass., III, P. I, 1921 p. 76 fig. 1-3. - Peritheciis nervicolis lineariter dispositis, primum subepidermicis dein erumpentibus, nigris 1-3 v. usque 4 mm. long 1/4-1/2 mm. latis, longitudinaliter dehiscentibus; ascis cylindraceoclavatis, tenuiter tunicatis 85-100 \* 4-5, paraphysibus filiformibus apice quandoque furcatis obvallatis; sporidiis hyalinis bacillaribus  $48-55 \times 1-1,5$ .

Hab. in Saccharo officinarum (Graminaceae), Hawaii. 9. Lophodermium arundinaceum (Schrad.) Chev. \* L. alpinum Rehm in 7000 Ber. Bayer. Bot. Ges. XIII (1912) p. 119. — A typo differt prae-

cipue sporidiis latioribus,  $45-70 \times 3,5-4,5$ .

Hab. in foliis Graminum in Tirolia, Bavaria, etc.

10. Lophodermium Planchoniae Rehm, Ascom. Philippin. VII, in Lea- 1004 flt. of Philippin. Bot. VIII, 1916, p. 2925. — Perithecia in maculis orbicularibus, circa 0,5 cm. latis, fuscidulis, tenerrime nigromarginatis, epi-, rarius hypophyllis, gregarie innata, primitus hemisphaerica, mox ellipsoidea, recta vel curvatula, nigra, rima tenuissima longitudinali, interdum triangulariter aperta, marginibus non distantibus, nitentia, 0,5-0,8 mm. lata vel longa; ascis cylindraceis, apice rotundatis, 50-60 \* 4-5, 8 sporis; sporis filiformibus, rectis, pluriguttulatis, hyalinis, 40 \* 1, parallele positis; paraphysibus filiformibus, hyalinis, 1 µ diam., apice non curvatis.

Hab. ad folium Planchoniae spectabilis (Lecythidaceae), Los Baños, Ins. Philipp. (C. F. BAKER).

11. Lophodermium subtropicale Speg., Mycet. Argent. VI, Anal. Mus. 7005 Nac. Buenos Aires XXIII (1912) p. 88. — Peritheciis maculis pallescentibus, determinatis, late ambientibus, linea tenui fusca repanda limitatis insidentibus, laxissime gregariis, per epidermidem erumpentibus, elongatis, utrinque acutis, convexulis, rima angustis-

sima dehiscentibus, atris, opacis, 1-2 mm. longis, 400-500 a latis, contextu indistincto; ascis cylindraceis, utrinque attenuatis, breviter pedicellatis, 100-150 \* 7-8, paraphysibus filiformibus, parum longioribus, apice saepe curvulis vel inflatulis, cinctis, jodi ope nulla; sporidiis fasciculatis, filiformibus, rectis vel vix flexuosulis, guttulatis, hyalinis, 75-100 \* 1.

Hab. in ramis foliisque aridis adhue pendulis Psidii sp. (Myrtaceae), in dumetis prope Puerto Leon, Misiones, Argentina.

12. Lophodermium Passiflorae Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 402. - Peritheciis in cortice hand decolorato dispersis, innatis, caulis longitudini parallelis, linearibus, rectis, utrinque vix acutatis, glabris, nigris, 24 mm. longis, 0,4 mm. latis, medio rima longitudinali percursis, labiis acutis vix distantibus; ascis cylindraceis, apice rotundatis, octosporis, 75-80 × 5-6, paraphysibus filiformibus, hyalinis, ad apicem 2 μ crassis; sporidiis parallele positis, filiformibus, rectis, guttulatis, hyalinis, 60.70 \* 1.

Hab, in caulibus emortuis Passiflorae quadrangul a r i s (Passifloraceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER) - Affine, ut videtar L. javanici Penz. et Sacc.

13. Lophodermium Bolivarii Gz. Frag., Trab. Mus. Nac. Cienc. Natur., ser. Bot. n. 4 (1914) p. 33 extr., fig. 9-10. - Peritheciis innato-superficialibus, numerosis, sparsis, membranaceis, in sicco subcoriaceis, ellipsoideis vel oblongatis, nudis, nigris, 350-400 × 200-250, demum rima longitudinali dehiscentibus; ascis cylindraceo-clavatis, longe attenuatis vel stipitatis, apice rotundatis vel leniter acutatis, 70.90 × 10.12, medio annulatim dehiscentibus; paraphysibus copiosissimis, filiformibus, rectis, apice valde incurvatis vel flexuosis, pluriguttulatis, ascos superantibus usque ad  $100-120 \times 1.5-2$ ; sporidiis filiformibus, lineari-fusoideis, utrinque attenuatis, rectis, curvulis vel flexuosis, 50.60 × 1-1,5, hyalinis, pluriguttulatis, parallele fasciculatis.

Hab. in caulibus siccis vel emortuis Paeoniae Broterii (Ranunculaceae), in montibus Carpetanis, Hispania.

14. Lophodermium revesianum Rehm, Ascomyc. Philipp. V, Leaflets 7008 of Philipp. Botany VI (1914) p. 2233. - Ascomatibus in maculis circularibus, saepe confluentibus, flavidule decoloratis, 1-3 cm. latis plerumque gregariis, epiphyllis, innatis, atris, primitus convexulis, clausis, mox lirelliformibus, medio longitudinaliter apertis, labiis arcte conniventibus, rectis vel subcurvatis, utrinque obtusis, gla-

bris, 0,5-1,5 mm. longis, 0,2-0,4 mm. latis, siecis applanatis; aseis cylindraceo-clavatis, apice rotundatis, octosporis, 95  $\times$  5; paraphysibus filiformibus, 1,5  $\mu$  er., ad apicem subcurvatis; sporidiis filiformibus, rectis, continuis, guttulatis, hyalinis,  $50 \times 1$ , parallele dispositis.

Hab. in foliis delapsis ignotis in silva, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S.A.Reyes).—L. Mangiferae eui proximum, imprimis ascomatibus minoribus differre videtur.

#### LOPHIUM Fries - Syll. II p. 799, IX p. 1126, XVII p. 914.

1. Lophium schizosporum Maire, Bull. Soc. H. N. de l'Afr. du Nord, 7009 1917, p. 172.— Peritheciis nigris, nitidis, subcarbonaceis, fragilibus, in subiculo lanoso atro-brunneo, copioso, sparsis, sessilibus, erectis, 0,5 × 0,3-0,4, securiformibus, acie apicali basi subaequali v. latiori, faciebus transverse striatis, basi hyphis atro-brunneis (hyphis subiculi similibus) lanata; ascis octosporis cylindraceis, basi longissime attenuatis, apice rotundatis, crasse tunicatis, 400-500 × 10-12; paraphysibus copiosis, filiformibus, 1  $\mu$  cr., multiseptatis, hyalinis, non v. parce ramosis, rectis; sporidiis primitus filiformibus, hyalinis, fasciculatis,  $^2/_3$  - $^3/_4$  longitudines asci aequantibus, multiseptatis, dein dilute brunneis, mox in articulos numerosissimos cylindricos 17-30 × 3, 5-8-septatos, utrinque rotundatos secedentibus.

Hab. in ramis delapsis Ilicis Aquifolii (Aquifoliaceae), in M. Atlante, Afr. bor.

# **ACROSPERMUM** Tode — Syll. II p. 807, IX p. 1128, XIV p. 723, XVI p. 1146, XXII p. 578.

1. Acrospermum parasiticum Syd. in Syd. et Butl., Ann. Mycol. IX, 7010 1911, p. 379. — Maculis distinctissimis, irregularibus, expansis, 1/2·4 cm. long., superne sordide albis, inferne saepe rufis v. alborufis, linea obscuriore cinctis; peritheciis hypophyllis, paucis subinde etiam epiphyllis, solitariis v. saepius binis trinis (raro quaternis) fasciculatis, erectis, rectis, teretibus, cylindraceo elavatis, in vivo haud v. vix compressis, apice obtuse attenuatis, parte superiore 200-280 μ cr., deorsum multo angustioribus et 120-160 μ latis, totis 900-1200 μ long., atro-brunneis, sursum pallidioribus, in sicco atris; ascis cylindraceis, 250-400 × 4-6, octosporis; sporidiis ascorum longitudine, 1 μ cr.; paraphysibus ascos superantibus, 1 μ cr.

Hab. in foliis vivis v. languidis Heptapleuri venulosi (Araliaceae), Kumaon Himalaya, Indiae or. (INAYAT) 2. Acrospermum Bromeliacearum Theiss., Broteria, Bot., v. XII, 1914, 7011 fasc. I, p. 26, fig. 5. -- Maculis nullis. Perithecia innata, sicca nigra, erecta, solitaria v. rarius e stipite communi geminata, subulato-glossoidea, medio latiora compressa, 1,5·2 mm. longa, medio 0,4 basi 0,2,5 mm. lata hyphis radiantibus ascendentibus hyalino-violaceis 5 μ cr. ornata; asci 220-280 × 5·6, paraphysibus filiformibus tenerrimis ascos vix superantibus. Sporidia filiformia hyalina, ascorum longitudine, septis fere imperceptibilibus in articulos 8-10 μ long. divisa.

Hab, in foliis Bromeliaceae, Sao Leopoldo, Brasiliae (J. Rick).

3. Acrospermum Maxoni Farlow in L. W. Riddle, Mycologia, 12., 1920, 7012 p. 179, tab. II fig. 1-5. — Perithecia solitaria dispersa aut rarius geminata, superficialia erecta, 0,7-1,3 mm. altit., 0,22-0,3 mm. latit., clavata compressa, apice rotundata vel obtusa, infra in stipitem tenuem cylindraceum attenuata (stipite 0,2-0,27 mm. altit., 0,07-0,09 mm. diam.), primitus clausa dein ostiolo ellipsoideo aperta, sicca coriacea, madefacta carneo-cartilaginea, fusco-nigra nitida, apice argillaceo, basi mycelio distincto irregulare rotundato arachnoideo circumcincta, centro fusco, margine stramineo; asci 8-spori anguste cylindracei elongati, circa 400 ≈ 5; sporidiis hyalinis filiformibus irregulariter flexuosis haud spiraliter contortis, continuis, parum brevioribus quam ascis, circa 1 μ latis; paraphysibus copiosis capillaribus.

Hab. in frondibus vivis Polypodii induentis et cretati (Filices), pluribus locis, Panama, Costa Rica, Jamaica, America bor. (W. R. MAXON, L. M. UNDERWOOD).

4. Acrospermum Elmeri Syd. in Leaflets of Philipp. Bot. VI (1913) 7013 p. 1931.— Maculis amphigenis, irregularibus, valde conspicuis, magnis, pallidis insidens; peritheciis solitariis vel saepe etiam pluribus, 2-6, basi connatis, cylindraceo-clavatis, in sicco valde compressis, 0,5-1,25 mm. altis, 200-300 μ latis, apice obtusis, griseo-brunneis vel cinnamomeo-brunneis, ad apicem dilutioribus, vix vel non stipitatis; ascis cylindraceis, 200-450 ≈ 4, octosporis; paraphysibus ascos superantibus, tenuissimis; sporidiis tenuissime filiformibus, eguttulatis, non septatis, hyalinis, ascorum fere longitudine, 0,5 μ crassis.

Hab. plerumque in pagina inferiore foliorum vetustorum Donaeis cannaeformis (Graminaceae), Cabadbaran, Mindanao, ins. Philipp.

5. Acrospermum latissimum Sydow, Leaflets of Philipp. Bot. V (1912) 70 p. 1544. - Maculas amphigenas orbiculares vel irregulares, 3-10 mm. longas, primo avellaneas dein expallentes, ochraceas vel albidas, distincte sed anguste atropurpureo marginatas efformans: peritheciis in maculis sparsis, solitariis, haud pluribus basi connexis, clavatis, humidis superne teretibus, in sicco compressis, brevissime crasseque stipitatis, atro-brunneis, 400-600 µ longis, clavula 150-180 a crassa, contextu brunneo; ascis cylindraceis, apice rotundatis et incrassatis, deorsum attenuatis et breviter stipitatis. 260-325 × 14-16, octosporis; paraphysibus numerosis, filiformibus. tenuissimis, 0,75-1 µ cr., ascos aequantibus vel leniter superantibus: sporidiis parallele positis, crasse filiformibus vel vermiformibus. flexnosis, hyalinis, utrinque obtusis, usque ad 300 μ longis, 3,7-4,5 μ crassis, saepissime distinctissimeque septatis (ca. 40-70-septatis). ad septa haud constrictis, loculis singulis quoad longitudinem inaequalibus, 3-8 µ longis.

Hab. in foliis vetustis Derridis mindorensis (Leguminosae), Puerto Princesa, Palawan, ins. Philipp.— Ob ascos et sporidia insolite lata species facillime dignoscenda.

6. Acrospermum syconophilum Speg., Mycet. Argent. VI, Anal. Mus. 7011 Nac. Buenos Aires XXIII (1912) p. 89.— Maculis amphigenis, repando-discoideis, subdeterminatis, 5-15 mm. diam., superne cinereis interne avellaneis; peritheciis hypophyllis, sparsis vel hinc inde 3-5-gregariis, innato-erumpentibus, dein subsuperficialibus, cylindraceo-ellipsoideis, 300-400 μ altis, 180-200 μ diam., atris, glabris, levibus, apice obtusis et umbilicato-ostiolatis, contextu olivaceo indistincto; ascis subcylindraceis, breviter pedicellatis, 225-250 × 7-8, 2 aparaphysatis, cito diffluentibus; sporidiis fasciculatis, filiformibus, tenuissimis, rectiusculis, utrinque acutiusculis, 200 × 1, eseptatis ac eguttulatis.

Hab. in foliis languidis Urostigmatis radulae (Moraceae), in silvis prope Puerto Léon, Misiones, Argentina.

7. Acrospermum Puiggarii Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 7016 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 121. — Sparsum v. laxissime gregarium, elavatum, in sieco corneum; perithecio atro laevi opaco, superne obtusissime rotundato, deorsum in pedicello parum breviore pallido subpellucido crassiusculo insititio attenuato, 1-1,5 mm. × 250-300 μ cr.; ascis linearibus praelongis paraphysatis 400 × 10; sporis filiformibus tenuibus continuis fere ascorum longitudine, hyalinis, 350 × 1.

Hab. ad Muscos corticolos, prope Apiahy Brasilia, America austr. trop. (J. PUIGGARI).

#### APPENDIX

- Fam. Pseudosphaeriaceae sensu Theiss. et Syd., Ann. Myc. 1918, p. 1. Fructificatio stromatica simplex (pseudosphaeriacea) nec composita (dothideacea), et tunc duo Ordines sistunt: Pseudosphaeriales et Dothideales. Membrana uniformi, asci e lata basi versus apicem convergentes. Ad Pseudosphaeriales Familiae nonnullae Pyrenomycetorum adscriptae sunt, de quibus confr. in l.c.—Sec. AA. gen. ad Pseudosphaeriaceas (+ Montagnelleae) hucusque pertinentia: Haplothecium, Montagnellina, Pyreniella, Cryptosporina, Haplodothis, Pseudosphaerella, Diplochorella, Cyclodothis, Scirrhiachora, Crotone, Phragmosperma, Montagnella, Hyalocurreya, Ourreya, Epibotrys, Ophiocarpella.
- PSEUDOPLEA v. Höhnel, Ann. Mycol. 16., 1918, p. 162.— Stromata parva perithecioidea rotundata immersa apice prominentia, ostiolo distincto destituta, parenchymatica. Asci capitati, pauci tantum ovoidei, octospori. Sporidia elongata hyalodictya. Typ. gen.:
- 1. Pseudoplea briosiana (Poll.) v. Höhn., Pleosphaerulina briosiana Pol- 7017 lacci, Syll. XVI p. 554.
- MONASCOSTROMA v. Höhnel, Ann. Mycol. 16., 1918, p. 160.— Stromata parva immersa cupuliformiter prominula, parenchymatica, apice demum irregulariter tenuiterque aperientia. Loculi monoasci. Asci globoso-ovoidei octospori. Sporidia phaeodidyma. Typ. gen.:
- 1. Monascostroma innumerosa (Desm.) v. Höhn., l. c., Hendersonia in-7018 numerosa Desm., Syll. III p. 451.
- SCLEROPLEELLA v. Höhnel, Ann. Mycol. 16., 1918, p. 158. Stromata immersa, rotundata v. elongata, simplicia v. aggregata, intus pallide plechtenchymatica extus crusta brunnea limitata. Asci aggregati, breves, lati, octospori. Sporidia phaeophragmia. Typ. gen.:
- Scleropleella personata (Niessl) v. Höhn., l. c., Leptosphaeria perso-7019
  nata Niessl, Syll. II p. 59.— Huic gen. pertinent etiam verisimiliter
  Lept. Silenes acaulis De Not., Lept. plemeliana Niessl, Sphaerella
  primulaecola Wint.

- EPIPOLAEUM Theiss. et Syd., Ann. Mycol. 16., 1918, p. 7. Fructificatio perithecioidea, immersa, parietibus crassis stromaticis paren. chymaticis praedita infra depressa et hyphis teeta; hymenium basilare. Asci distincti octospori, poro nullo, parietibus crassis. Sporidia phaeodidyma. - Habitus Herpotrichiae Fuck. - Typ. gen. :
- 1. Epipolaeum irradians (Pat.) Th. et Syd. l. c., Asterina irradians Pat., 7020 Syll. XI p. 255.
- PHANEROCOCCUS Theiss. et Syd., Ann. Mycol. 16., 1918, p. 9. Fruetificatio globosa perithecioidea, crasse parenchymatica, levi, mycelio destituta. Loculi monasci, basilares; asci cylindracei octospori. Sporidia hyalophragmia. - Typ. gen.:
- 1. Phanerococcus Feijoae (Rehm) Th. et Syd., l. c., Asteridium Feijoae 7021 Rehm, Syll. XVI p. 1142.
- ACANTHARIA Theiss. et Syd., Ann. Mycol. 16., 1918, p. 15. Est Hypophlegnia mycelio setulis distinctis praeditum (cnfr. supra p. 252). — Typ. gen.:
- 1. Acantharia echinata (Ell. et Ev.) Th. et Syd., l. c., Dimerosporium 7022 echinatum Ell. et Ev., Syll. XI p. 259.
- AMEROSTEGE Theiss., Verh. Zool.-bot. Ges. Wien, Bd. 66., 1916, p. 396. — Clypeo epidermali. Perithecia membranacea, immersa, clypeo perforantia. Asci clavati aparaphysati octospori. Sporidia hyalina simplicia. — Typ. gen.:
- 1. Amerostege pseudo-pustula (Br. et Har.) Theiss., l. c. cum icone, Phy- 7023 salospora Pseudo-pustula Berk. et Curt., Syll. IX p. 594.
- PSEUDOPLEOSPORA F. Petrak, Ann. Mycol. 17., 1919, p. 84. Perithecia immersa elongata non ostiolata sed apice rima longitudinali irregulari praedita, vix prominentia, intus uni- v. incomplete 2-3 lecularia; asci octospori, paraphysati; sporidia colorata 3-5 septata et septo long. plus minus distincto praedita. - Genus incertae sedis.
- 1. Pseudopleospora ruthenica F. Petrak, l. c. Peritheciis 0,4-1 mm. 7024 long., 120-250 µ latis et altis, apice rima 300 µ longa 90 µ lata irregulariter apertis; ascis cylindraceis clavatis v. cylindraceis, apice late rotundatis subsessilibus v. breviter pedicellatis, 90-130 (plerumque 100 μ) long. 11-13 μ latis, octosporis; sporidiis elongatoovoideis v. piriformibus, rectis v. parum inaequalibus, ad septa

non, v. vix constrictis, olivaceo-brunneis,  $20\text{-}26 \times 7\text{-}8$ , paraphysibus parum distinctis filiformibus ascos parum superantibus.

Hab. ad caules emortuos Eupatorii cannabini prope Strzalkow prope Stryi, Galizia austr. (F. Petrak).

# \*) DISCOMYCETAE

Syll. VIII p. 3, X p. 1, XI p. 391, XIV p. 378, XVI p. 695, XVIII p. 1, XXII p. 579.

# Fam. 1. Myriangiaceae Nyl.

Cl. THEISSEN ex Myriangiaceis affinibusque fungis novúm Ord. Myriangiales condidit, cuius systema hoc modo composuit:

#### Myriangiales Starb.

Theissen, Verh. k. k. zool. bot. Ges. Wien, 1916, p. 311; Theissen et Sydow, Ann. Mycol. 15., 1917, p. 433.

A. Fructificatio intramatricalis, extus indeterminata

PROTOMYRIANGIEAE Th. et Syd.

a) Stroma hyalinum plechtenchymaticum, intus extusque conformi

Elsinoëar v. Höhn.

b) Stroma hyalinum, plechtenchymaticum, extus cortice obscuriore limitatum

PLECTODISCELLARAE Woronin.

 B. Fructificatio libera superficialis, distincta

EUMYRIANGEAE Theiss.

a) Stroma homogeneum, sclerotiaceum, incolore, extus tantum muco nigrescenti vestitum

MYXOMYRIANGIACEAE Th.

b) Stroma extus distincte parenchymaticum nec mucosum

I. Stroma interstitiale cellulare

1. Asci pluriseriati

2. Asci uniseriati

II. Stroma interstitiale paraphysoideum

SACCARDIACEAE V. Höhn.

DOTHIORACEAE Th. et Syd.

MYRIANGIACEAE Nyland.

\*) Cnfr. Rehm, Zur Kenntnis der Discomyceten Deutschl. (in Ber. Bayer. Bot. Ges. 1912-1914), ubi permultae observationes criticae, emendationes e additamenta occurrunt.

#### Sect. 1. Hyalosporae

**BAGNISIELLA** Speg. — Syll. II p. 589, IX p. 1004, XVI p. 616, XXII p. 407.

Bagnisiella Diantherae J. M. Lewis, Mycologia 4., 1912, p. 70, t. 702
 58-61. — Stromate erumpente pulvinato lineari, 10-30 mm. longo
 2-4 mm. lato, nigro levi demum rugoso-tuberculato; peritheciis numerosis e subgloboso elongatis stromate immersis, 475-550 × 300-350, ostiolo elongato; ascis clavatis aparaphysatis octosporis, 50-65 × 10-15; sporidiis biseriatis hyalinis continuis allantoideis, 6-9 × 2.— In eodem stromate primum evolvuntur conidiophora ramosa fasciculata conidiis hyalinis ovalibus unicellularibus, 10-15 × 3, praedita.

Hab. in caulibus vivis Diantherae americanae (Acanthaceae), Austin Texas, Amer. bor.

2. Bagnisiella Alibertiae P. Henn., F. S. Paul. IV (Puttem.), Hedwig. 7024 48., 1908, p. 7. — Stromatibus epiphyllis raro hypophyllis innatosuperficialibus, sparsis vel aggregatis. subgloboso-pulvinatis, atrosubcarbonaceis, rugulosis, ca. 1 mm. diam.; loculis immersis, subglobosis rotundato-ostiolatis, contextu subcoriaceo, atroviolaceis; ascis cylindraceo-clavatis, obtusis, paraphysatis, 8-sporis, 70-90 × 8-12; sporis oblique monostichis, oblongis hyalinis continuis (immaturis), 12-15 × 4-5.

Hab. in foliis coriaceis Alibertiae concoloris (Rubiaceae), Meninos, S. Bernardo, Brasilia.

#### Sect. 2. Phaeodidymae

- BUTLER).—Ascomata perexigua, erumpenti-superficialia, pulvinato-disciformia, sessilia, carnosula, atra, farcta, intus ascos sessiles, irregulariter dispositos foeta. Asci breviusculi, aparaphysati, octospori. Sporidia didyma fuligineo-fulva. Intermixta adsunt conceptacula similia, ut videtur, conidica: conidiis oblongis continuis, hyalinis. A gen. Microphymate Speg. ceterisque familiae generibus sporidiis phaeodidymis recedit.
- 1. Butleria Inaghatahani Sacc., l. c. p. 303.— Ascomatibus amphigenis, 7027 in areis vagis brunneis gregatim nascentibus perexiguis, disciformibus, immarginatis, atro-nitidulis, 80-100 μ diam., disco plano v. leviter umbilicato, contextu laxe celluloso, carnosulo, ochraceo-

brunneo; ascis inordinatis, oblongis,  $33 \times 12$ , v. elliptico-ovoideis  $25 \times 16$ , subsessilibus, apice late rotundatis, aparaphysatis, octosporis; sporidiis subtristichis, elliptico-oblongis, utrinque rotundatis, constricto-didymis,  $9-10 \times 4.5$ , fuligineo-fulvis; conidiis (?) elliptico-oblongis, biguttatis,  $7-8 \times 2.7$ , hyalinis.

Hab. in areis latis, irregularibus, putrescendo sordide brunneis, leviter bullosis foliorum adhuc vigentium Vangueriae sp. Krishnapone, Comillae, Indiae or. (INAGATAHAN).

#### Sect. 3. Hyalophragmiae

EURYTHECA De Seyn. -- Syll. II p. 651, VIII p. 846, IX p. 1050, XXII p. 579, XXIV p. 538.

1. Eurytheca trinitensis Sydow, Ann. Mycol. XIII, 1915, p. 40, fig. 2.— 7028 Stromatibus sparsis, erumpenti-superficialibus orbicularibus vel irregularibus, planis, tota basi matrici affixis, 1 ½-2 ½ mm. longis, 1-2 mm. latis, ca. 0,5 mm. crassis, atris, subcarbonaceis, extus non vel parum rugosis, contextu indistincte fibroso usque granuloso-grumoso; loculis numerosis, monoascigeris, omnibus fere in strato singulo sitis; ascis late saccatis, deorsum sensim attenuatis, aparaphysatis, 72-80 × 42-50, octosporis, pariete 8-10 μ crasso; sporidiis saepe mox ex ascis eructatis, muco conjunctis, fusoideis, saepe inaequilateris, 10-14-septatis, non constrictis, hyalinis, 60-68 × 17-21.

Hab. in corticibus truncorum, Blanchisseuse, ins. Trinidad (W. E. Broadway).

ASCOSTRATUM Sydow, Ann. Mycol. X, 1912, p. 41 (Etym. ascus et stratum, quia fungus applanatus sistet stratum loculis ascigeris perforatum). — Stromata erumpenti-superficialia, orbicularia v. forma irregulari, plana, hand carbonacea, molliuscula, obscure brunnea, tandem subatra, tota basi matrici affixa, pariete fibroso-celluloso, intus loculis numerosis monoascigeris praedita. Asci ovato-globosi, 8-spori. Sporidia transverse pluriseptata, hyalina.

1. Ascostratum insigne Sydow, l. c. p. 41 fig. II.— Stromatibus spar-7029 sis, erumpenti-superficialibus, orbicularibus v. forma irregulari, planis \(^1/\_4\)-\(^2/\_3\) mm. longis, tota basi matrici affixis, obscure brunneis, sessilibus, subatris, contextu exteriore fibroso, interiore indistincto fere granuloso-grumoso, loculos numerosos irregulariter sparsos continentibus; ascis ovato-globosis, apice leniter incrassatis, octosporis, 60-70 \(\times\) 40-55; sporidiis oblongis v. late fusiformibus,

rectis v. saepius inaequilateris, utrinque obtusis, 7-9-septatis, haud constrictis, hyalinis (etiam in maturitate),  $45-58 \times 16-18$ .

Hab. ad corticem E u p h o r b i a e sp., Amanzimtote Natal, Africae austr. (E. M. Doidge). — Kusanoae proxima, differt praecipue sporidiis hyalinis et constitutione stromatis.

#### Sect. 4. Hyalodictyae

MYRIANGIUM Mont. et Berk.— Syll. XVI p. 800, XVIII p. 192, XXII p. 580.

1. Myriangium philippinense Sydow, Ann. Mycol. XII, 1914, p. 567.— 7650 Stromatibus amphigenis, haud maculicolis, sparsis, e thallo orbiculari plano adnato striatulo costato 1-3 mm. lato oriundis, primo discretis, tuberculiformibus, dein confluentibus et e mutua pressione difformibus, tuberculum sphaeroideum v. irregulare formantibus aut densissime congestis, minutis, atris, strato exteriore carbonaceo, interiore pallido ex cellulis 6-8 μ diam. formato; loculis in superiore parte stromatum di-tristichis v. ibique plus minus irregulariter denseque positis, monoascigeris; ascis variabilibus globosis v. ovatis et 25-35 × 22-28 aut subinde elongatis usque 50 μ long. et 18 μ tantum latis, aparaphysatis, octosporis; sporidiis ovato-oblongis, utrinque late rotundatis, horizontaliter 3-septatis, loculis 1-3 semel longitudinaliter septatis, hyalinis, 18-24 × 6-8, ad septa vix v. leniter constrictis, dimidia parte superiore plerumque paullulum crassiore.

Hab. in foliis vivis v. languidis Eugeniae perpalli. dae (Myrtaceae), Angat prov. Bulacan Ins. Philippin. (M. RAMOS).

2. Myriangium andinum Speg., Mycet. Argent. VI, Anal. Mus. Nac. 7031 Buenos Aires XXIII (1912) p. 99.— Stromatibus matrici arcte adnatis, discoideo-subdifformibus, 0,5-1 mm. diam., saepe confluentibus et ramulos totos crusta atra 150-250 μ crassa obtegentibus, colliculoso-rimulosis, nigris, subcarbonaceis; loculis pusillis, vix papilliformi-prominulis, subglobosis, 80-100 μ diam., albo-farctis; ascis dense constipatis, sessilibus, ex alto tetra-pentagonis, e latere obovatis, 40 × 20, octosporis; sporidiis subcylindraceis, rectis vel lenissime inaequilateris, utrinque rotundatis, hyalinis, 15-20 × 6-8, transverse 3-septatis (rarissime irregulariter 5-septatis), ad septa, praecipue ad medium constrictis, loculis medianis longitudinaliter divisis.

Hab. in ramulis vivis Condaliae lineatae (Rhamna-

ceae), in collinis circa Potrerillos prope Mendoza, Argentina.

3. Myriangium Citri P. Henn., Fungi Paul. IV (Puttem.) Hedwig. 48. 7032 (1918) p. 13.— Stromatibus amphigenis, superficialibus, crustaceis, rotundato-angulatis, rugulosis, 1-2 mm. diam., atris, loculis subglobosis monoascis; ascis subglobosis, vertice tunicatis, 30-45 μ diam., octosporis; sporidiis conglobatis vel ellipsoideis, rectis vel subcurvulis, ca. 5-7-septatis, muriformibus, hyalinis, 20-24 \* 5-8.

Hab. in foliis Citri nobilis (Rutaceae), Osasco, S. Paulo, Brasilia.

- ANGATIA Sydow, Ann. Mycol. XII, 1914, p. 566 (Etym. ab oppidulo Angat cujus in vicinia fungus nascitur). Syll. XXIV p. 539. Stromata superficialia, peripherice sterilia, centro fertilia. Stromata ascigera crassa, parenchymatice contexta, primitus clausa, tandem aperta et loculos 1 vel paucos disciformes continuos majusculos nudantia. Asci ovati, aparaphysati, octospori. Sporidia muriformia, hyalina. Videtur genus parallelum Symphaeophygmati Speg.
- 1. Angatia Eugeniae Sydow, l. c. p. 566, fig. 4. Stromatibus hypophyllis, superficialibus, rotundatis v. irregularibus,  $^{1}/_{2}$ - $^{11}/_{2}$  mm. diam., atris, ad ambitum sterilibus, centro fertilibus; stromatibus ascigeris rotundatis v. irregularibus,  $^{1}/_{2}$ -1 mm. diam., crassis, opacis, subcarbonaceis, tandem apertis et loculos continuos 1 vel paucos (2-4), planos quasi discoideos obscure fuscos nudantibus; ascis pluristichis, ovatis v. ovato-ellipsoideis, ad apicem rotundatis et incrassatis, basi breviter stipitatis, 35-50 × 22-26, in massa grumosa sitis, aparaphysatis; sporidiis distichis v. irregulariter positis, ellipsoideis, transverse 5-7-septatis et non v. vix constrictis, cellulis mediis septo unico longitudinali percursis, hyalinis, 17-19 × 10-11.

Hab. in foliis Eugeniae perpallidae (Myrtaceae), prope Angat prov. Bulacan Ins. Philippin. (M. RAMOS).

## Sect. 5. Phaeodictyae

ULEOMYCES P. Henn. - Syll. XI p. 364, XXII p. 579.

1. Ulcomyces cinnabarinus v. Höhnel, Ber. deutsch. bot. Ges. XXXVI, 7034 1918, p. 311 (nomen nudum).

Hab. parasiticum in stromate Antennulariae (Coleroa) aggregatae (Wint. ut Venturia) v. Höhn.

2. Uleomyces philippinensis Syd., Ann. Mycol. 15., 1917 p. 218, 219.— 7035 Peraffinis Ul. sanguineo (= Uleom. (Ascomycetellae) sanguineo

(Speg.) Syd., cfr. Syll. VIII p. 847), a quo differt sporis etiam in maturitate 3-4-septatis et saturatius coloratis, 22-26 × 8-10, cellulis plerumque duabus superioribus semel longitudinaliter divisis.

Hab. parasitica in crusta sterili atra alicujus fungi (Hadrone matis?) ad folia Quercus sp., Mt. Isarog, Camarines, Ins. Philipp. (M. RAMOS).

- MYXOMYRIANGIUM Theissen, Ann. Mycol XI, 1913, p. 507.— Subiculum tenue hyphis olivaceis parce septatis ramosisque. Ascomata pauca connata, parenchymatica, contextu molli aequali laeticolore, subhyalina, extus muco indurato nigrefacta. Asci solitarii v. pauci, octospori, aparaphysati, perithecia carentes. Sporae hyalinae, triseptatae, septo longitudinali interdum addito.
- 1. Myxomyriangium Rickii (Rehm) Theissen, l. c. p. 507 fig. V. Ita 7038 vocanda est Saccardia Durantae Pat. var. Rickii Rehm, Saccardinula Rickii (Rehm) v. Höhn.
- ZUKALIOPSIS P. Henn., Syll. XVII p. 554; XXII p. 59.— Syll. XXIV 7037 p. 367, 369.— Sec. v. Höhnel (Ber. deutsch. bot. Ges. Bd. XXXVI, 1918, p. 307) gen. hoc eodem est ac Myxomyriangium Theissen 1913.

Genera incertae sedis et species descriptae ulterius inquirendae

MICROPHYMA Speg. - Syll. VIII p. 844, XXII p. 581.

1. Microphyma? microsporum Speg., Mycet. Argent. VI, in Anal. Mus. 7038 Nac. Buenos Aires XXIII (1912) p. 97. — Maculis nullis; peritheciis sparsis, sessilibus, lenticularibus, 100-200 μ diam., extus atris, glabris, levibus, intus carnosulis, hyalinis, astomis sed per aetatem stellatim dehiscentibus, excipulo tenui, coriacello, eximie parenchymatico, atro; ascis muco denso immersis, subglobosis, 15-25 × 15-20, crassiuscule tunicatis, breviter pedicellatis; sporidiis cylindraceo-subclavulatis, superne obtusiusculis, inferne acutiusculis, medio 1-septatis, non vel vix constrictis, hyalinis, minutis, 9-15 × 2,5-3.

Hab. in foliis vivis Ocoteae puberulae (Lauraceae), et Phoebis porphyriae (Lauraceae), prope Calilegua, Salta, Argentina. — Species ad Microthyrium nonnihil vergens.

Microphyma macrosporum Speg., Mycet. Argent. VI, in Anal. Mus. 7039
 Nac. Buenos Aires XXIII (1912) p. 96. — Maculis nullis; peritheciis hypophyllis, hinc inde 3-7-gregariis, discretis, semilenticulari-

bus, 500-1000 µ diam., matrici arcte adnatis, nigris, glabris, contextu parenchymatico fusco, intus albis, subcarnosulis, per aetatem frustulatim deciduis; ascis sessilibus, obovatis, superne obtusissime rotundatis, 120 × 60, pulpa subgelatinosa immersis; sporidiis conglobatis, rectis vel leniter inaequilateris, utrinque subtruncato-rotundatis, medio uniseptatis, non vel vix constrictis, hyalinis, majusculis,  $30-50 \times 12-14$ , loculis, saepe grosse 1-guttatis.

Hab. in foliis vivis Maxillariae rufescentis (Orchidaceae), prope Bompland, Misiones, Argentina.

- PHYMATODISCUS Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 122. -- Stromata superficialia aggregato-confluentia, tuberculos difformes lobulatos efformantia, cortice atro carbonaceo tecta, intus subcarnoso-cornea pallida, cortice hinc inde frustulatim deciduo ac disculos ascigeros denudante; asci in pulpa disci polystiche nidulantes, 8-spori; sporae muriformes hyalinae — Est Myriangium operculatim dehiscens et superficiem ascigeram, fere ut in Discomycetibus, nudam exhibens.
- 1. Phymatodiscus quaraniticus Spegaz., l. c. cum icon. Stromata me- 7040 diocria atra,  $1.5 \times 1.3$  mm., primo scrupuloso-corrugata, serius disculos sordide carneos suborbiculares 1-5 convexulo-prominulos ostendentia; ascis distichis subglobosis 50 × 40, superne crasse tunicatis; sporidiis elliptico-elongatis v. subclavulatis, utrinque plus minusve rotundatis, 26-28 × 10-12, transverse 8-9-septato-constrictulis, septo altero longitudinali centrali continuo divisis, hyalinis.

Hab. ad corticem ramorum viventium Myrtaceae?, prope Villa Morra, Paraguay, America austr. trop. (J. D. Anisitz).

## Fam. 2. Saccardiaceae v. Höhn.

Syll. XXII p. 583

Sec. v. Höhnel, Ber. deutsch. bot. Ges. Bd. 36., 1918, p. 308, huc spectant gen.: Capnodiopsis P. Henn. (an Agyricae), Molleriella Wint., AGYRONA V. H., SACCARDIA Cooke, DICTYONELLA V. H.

MOLLERIELLA Wint. - Syll. VIII p. 845, XVI p. 1151, XVIII p. 192, XXII p. 586.

1. Molleriella disseminata Syd., Ann. Mycol. 14., 1916, p. 94. - Asco- 7041 matibus hypophyllis, per totam folii superficiem copiosissime distri-

butis, atris vel atro-brunneis, sub lente valida obscure cinnamomeo-brunneis, superficialibus, punctiformibus, 110-170  $\mu$  diam., convexis, immarginatis; hypothecio bene evoluto, usque 100  $\mu$  crasso, ex cellulis brunneolis 8-10  $\mu$  diam. composito, epithecio parum evoluto; ascis numerosis, radiantibus, ovato-globosis, 25-35  $\times$  20-26, octosporis, ut videtur parce paraphysatis, ad apicem incrassatis (6-8  $\mu$ ); sporidiis breviter lateque clavulatis, 3-septatis, ad septum medium leniter constrictis, apice late rotundatis, basim versus sensim attenuatis, hyalinis, 16-20  $\times$  7-8.

Hab. in foliis fruticis indeterminati, Seringal, Auristella Rio Acre, Peruvia (E. ULE).

## Fam. 3. Elsinoaceae v. Höhn.

ELSINOË Racib. — Syll. XVI p. 804, XXII p. 584.

1. Elsinoë amazonica Syd., Ann. Mycol. 14., 1916, p. 93.— Hypophylla, 7622 gallas orbiculares sparsas vel aggregatas applanatas 2-3 mm. diam. sordide ochraceas formans; ascis solitariis vel saepius pluribus aggregatis globosis vel ovato-globosis, 20-27 × 17-21, octosporis; sporidiis oblongis, utrinque obtusis, primitus 1-septatis, maturis 3-septatis, non constrictis, hyalinis, 16-18 × 5-7,5.

Hab. in foliis I resines sp. (Amarantaceae), Seringal, Auristella Rio Acre, Peruvia.

2. Elsinoë Calopogonii Syd., Ann. Mycol. 14., 1916, p. 93.— Epiphylla 7042 vel hypophylla, irregularis, verruciformis, saepe lobata, albida, minuta, 1/2-1/2 mm. diam.; aseis plerumque pluribus aggregatis, globasis vel ovato globasis, 26-32 × 20-24, octosporis; sporidiis oblongis, rectis vel subinde leniter curvulis, 3-septatis, non constrictis, hyalinis, 14-17 × 4 1/2-6.

Hab. in foliis Calopogonii caerulei (Leguminosae), Seringal Auristella, Rio Acre, Peruvia (E. ULE).

PLECTODISCELLA Woronichin, Mycol. Centrlbl. IV (1914) p. 232 et Bull. f. angew. Bot. 7., 1914, p. 438, tab. 120. — Ascomata sub strato immersa eoque basi arcte adnata, pustuliformia, demum erumpentia, non perfecte limitata, epithecio brunneo distincte evoluto, ex unico strato cellularum constituto. Asci irregulariter distributi, ovoidei, octospori, paraphyses nullae vel indistinctae. Sporidia 3-pluriseptata, hyalina. — Secundum Woronichin ad nov. Fam.

Plectodiscellaceae pertinens, inter Elsinoëeae et Discomycetes veri.

1. Plectodiscella Piri Woronichin, Mycol. Centrlbl. IV (1914) p. 232, 7044 c. ic. et Bull. angew Bot. 7., 1914, p. 438, tab. 120. — Maculis epiphyllis, albo-griseis, brunneo-marginatis, discoideis, 1-2 mm. diam. vel ovoideis, 4 × 2 mm., raro confluentibus; ascomatibus subcuticularibus dein erumpentibus, pustuliformibus plus minusve elongatis, 75-500 × 35-145; ascis ovoideis vel subglobosis, brevissime pedicellatis vel omnino sessilibus, 21-23 × 15-19, per ascoma irregulariter distributis, octosporis; sporidiis parallele vel sine ordine congestis, late fusoideis vel ovoideo elongatis, 3-septatis, hyalinis, 12-14 × 4.5. — Epithecium e cellulis polygoniis vel globosis, brunneis, 4-7,5 μ diam. constitutum; hypothecium pallide tincto, tenui, paraplectenchymaticum.

Hab. in foliis vivis Piri Mali et P. communis (Rosaceae), in regione cancasica, prope Volkovskaja et Macesta (gub. Cernomorsk).

Plectodiscella veneta Burkholder, Phyptopath. VII (1917) p. 91, fig. 7045
 1-3 et Cornell Univ. Agric. Exper. Stat. Bull. 395 (1917) pp. 157-181, f. 12-21. — Stromatibus solitariis v. gregariis pulvinatis, epidermide fusca disciformi mox dehiscenti tectis, intus contextu hyalino, parenchymatico v. indistincto, plerumque pluriloculatis; loculis monoascis, irregulariter sparsis; ascis globosis, 8-sporis, 24-30 μ diam.; sporidiis ovoideo-ellipsoideis, saepe flexis, hyalinis, 3-septatis, constrictis, cellula basilari obtusa praeditis, 18-21 × 6,5-8.

Hab. in ramis caulibusque vivis Rubi occidentalis, R. idaei var. aculeatissimi et R. neglecti (Rosaceae), New York, Amer. bor. — Status conidiophorus est Gloeosporium venetum Spegazzini.

## Fam. 4. Cookellaceae v. Höhn.

LEPTOPHYMA Sace. — Syll. VIII p. 844, XXII p. 585.

1. Leptophyma Bakeri Syd., Ann. Mycol. XIV, 1916, p. 367.— Ascomatibus hypophyllis, sine maculis, sparsis, omnino superficialibus, ambitu rotundatis, 0,3-0,8 mm. diam., tenuissimis, usque 30 μ crassis, obscure brunneis, plectenchymatice fibroso hyalineque contextis; ascis in una serie dispositis, ovato-globosis, basi plerumque leniter productis, 15-20 × 11-14, paraphysibus genuinis nullis, octosporis, J-; sporidiis plerumque parallele positis, oblongis, medio

vel prope medium 1-septatis, non vel leniter constrictis, utrinque rotundatis, hyalinis,  $9-11 \times 2^{1}/_{3}-3$ .

Hab. in foliis deciduis subcoriaceis in silva, Los Baños, ins. Philipp. (C. F. BAKER).

COOKELLA Sacc. — Syll. I p. 71, VIII p. 846, XVI p. 802, 1152, XXII p. 585.

1. Cookella Bomplandi Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 98.— Maculis nullis; peritheciis saepius epiphyllis, densiuscule gregariis sed discretis, superficialibus, atris, lenticularibus, 150-200 μ diam., coriacellis, intus subchlorinis, contextu indistincto; ascis dense constipatis, globosis, 30 μ diam., tenuiter tunicatis; sporidiis conglobatis, ellipsoideis, rectis vel leniter inaequilateris, utrinque rotundatis, hyalinis, 14-18 × 8-10, transverse 3-rarius 5-septatis, ad septum medium tantum constrictis, loculo mediano supero plerumque septo longitudinali diviso.

Hab. in foliis vivis Schini lentiscifolii (Anacardiaceae), prope Bompland, Misiones, Argentina.

2. Cookella Jörgenseni Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 99.— Maculis nullis; peritheciis plerumque epiphyllis, superficialibus, sparsis, hemisphaericis, 150-250 μ diam., nigris, molliusculis, in sicco collabescentibus, margine areola angusta prosenchymatico-radiante cinctis, contextu subparenchymatico atro; ascis dense constipatis, ellipsoideis, 60-80 × 35-45, pedicello brevissimo, crasso, noduloso suffultis, 4-6-8-sporis; sporidiis conglobatis, leniter inaequilateris vel subcurvulis, utrinque rotundatis, hyalinis, 37-45 × 10-15, transverse 7-septatis, ad septa constrictulis, loculis paucis longitudinaliter divisis.

Hab. in foliis vivis Roupalae brasiliensis (Proteaceae), in montanis Calilegua, Salta, Argentina.

# Fam. 5. Agyriaceae v. Höhn.

- AGYRIUM Fr. Syll. VIII p. 634, X p. 40, XVI p. 768, XVIII p. 140, XXII p. 586. Syn. Agyrina (Sacc.) F. E. Clements, Genera of Fungi 1909, p. 67, 174; typ. A. sexdecimsporum Fuck. Syll. VIII p. 636.
- Agyrium cephalodioides Nyl., Flora, 1865, p. 373; Vouaux, Bull. Soc. 7049
   Mycol. Fr. 1914 p. 185. Ascomatibus cephalodioideis, intus ex-

tusque obscure rubris; ascis octosporis, paraphysibus indistinctis; sporidiis ellipsoideis v. subglobulosis, hyalinis, simplicibus, 9- $10 \times 7-8$ .

Hab in thallo P a r m e l i a e p h y s o d e s (Lichenes), Islandia (NYLANDER). — Sec. Nylander sistunt etiam pycnidia verrucariaeformia, ostiolo rubro-brunneo, intus concoloribus, sporulis cylindraceis rectis,  $8-10 \approx 1.5$  praeditis.

2. Agyrium chartarum Peyl, « Lotos » Prag, VIII (1858) p. 31 fig. 7050 19. — Primitus globosum dein depressum, demum collabescendo scatellatum, subsessile, primitus roseum, dein flavo-rubrum, perexiguum excipulo nullo praeditum; ascis clavatis, apice rotundatis, octosporis, paraphysibus bacillari-clavulatis obvallatis; sporidiis monostichis, globosis.

Hab. in charta putrescente in calidariis hortorum, Kacin Bohemiae.

- RAMOSIELLA Sydow, Ann. Mycol. 15., 1917, p. 254. Affinis Agy-7051 ronae v. Höhn. 1909, sed praecipue differt ascomatibus erumpentisuperficialibus, planis, hypothecio plano et sporidiis coloratis. Typ. gen. Agyrona Calami (Rac.) v. Höhnel, Fragm. VI p. 88-90, Oesterr. bot. Ztschr. 1913 p. 170.
- \*) MICRODISCUS Sacc., Notae Mycol. XX, Nuovo giorn. bot. it. 23., 1916, p. 190 (corr. Microascus Sacc. I. c., non Zukal 1885).— Brachyascus Sydow, Annales Mycologici 15., 1917, p. 285 nom. nov.— Ascomata minutissima, superficialia, lignicola, disciformia, subceracea, atra, excipulo carentia, hypothecio tenui ex cellulis subgelatinosis formato. Asci verticaliter paralleli, ovoidei, sex-octospori; paraphyses indistinctae v. spuriae, epithecium grumosum, crassiusculum, nigricans formantes. Sporidia subpolysticha, oblonga, triseptata, rufo-fuliginea.— A gen. Molleriella differt imprimis sporidiis intense coloratis, ascomate basi nec bulbosa, nec discolori, sed applanata concolore.
- Microdiscus americanus Sacc., 1. c. (corrige Microascus). Ascoma-7052 tibus generis, plano-convexulis, basi plana puncto centrali affixis, subceraceis, opace nigricantibus, 240-300 μ diam.; ascis ovoideis.

<sup>\*)</sup> E mero lapsu typographico legitur l. c. Microuscus, sed evidenter Auctor scripserat Microdiscus, ut patet ex etymologia ibi data: « micros et discus! ».

basi vix tenuatis,  $22-26 \times 13-14$ , crassiuscule tunicatis, 6-8-sporis; sporidiis subtristichis oblongis, utrinque subrotundatis, initio 1-septatis, dein 3-septatis, medio constrictis, obscure guttulatis, rufofuligineis,  $10-11 \times 4.8-6$  (interdum intra ascum coalescentibus et massam atram formantibus).

Hab. in ligno subputrescenti Lirio den dri Tulipifera e (Magnoliaceae), Catskill mts. N. Y., America bor.

- DISCOMYCELLA v. Höhn. in Sitzungsb. k. Akad. Wiss. Wien CXXI,
  1, p. 400 (1912). Ascomata superficialia, discoidea, strato membranaceo basali cineta, excipulo tenui, filamentoso-contexto, basi nullo sed tantum lateraliter annulatim evoluto, hymenio usque ab initio libero. Asci clavati octospori. Sporidia hyalina, continua. Paraphyses valde ramosae, epithecium formantes. Genus peculiare, Agyrio praecipue affine sed excipulo annulari tantum praeditum.
- 1. Discomycella tjibodensis v. Höhn., loc. cit., p. 401 fig. 5. Asco- 7055 matibus omnino superficialibus, sparsis vel gregariis, obscure brunneis, disciformibus, 200-300  $\mu$  latis, 60-80  $\mu$  altis, membrana basali ex hyphis subhyalinis 1-2  $\mu$  cr. contexta, 70  $\mu$  circ. lata cinctis; excipulo basi nullo sed tantum laterali, cylindraceo ex hyphis tenuibus subparallelis brunneis composito; ascis clavatis, sessilibus vel breviter noduloso-pedicellatis, apice obtusis et poro jodi ope caerulescente praeditis, 50-60  $\times$  13·14; paraphysibus filiformibus 1  $\mu$  cr., copiosis, sursum dense ramosis, ramulis apice ad 3  $\mu$  incrassatis; sporidiis plerumque distichis, clavato-oblongis vel subfusiformibus, hyalinis, continuis, 12-14  $\times$  4-5.

Hab. in utraque pagina foliorum putridorum A m o m i sp. (Zingiberaceae), Tjibodas, ins. Java.

perficialis, globoso-perithecioidea, infra innata, mycelio destituta, contextu supra parenchymatico nigro, setulis brevibus tecto, apice late lacerata. Asci cylindracei tetraspori, hyphis latis paraphysoideis hyalinis continuis limitati, parallele dispositi non incrassati. Sporidia cylindracea, bilocularia brunneola levia.— Typ. gen. Parodiella Pseudopeziza Pat., Syll. XI p. 260.

# Fam. 6. Onygenaceae Fr. (Plectascineae p. p.)

ONYGENA Pers. - Syll. VIII p. 861, X p. 80, XI p. 440, XVI p. 807, XXII p. 589.

1. Onygena Bommerae Rouss, et Sacc., Ann. Mycol. XI, 1913, p. 322. 7055 Mycelio byssino, effuso, tenuissimo, candido; initio inserta, ceraceofragilis, sparsa v. subgregaria, deinde omnino libera, sessilis, e latere inaequaliter reniformis, ambitu subcircularis, subtus saepius depresso-umbilicata, rugulosa, jugiter clausa, 1,5-2 mm. lata, extus albido-cremea et sub vitro leniter flocculosa; gleba grumosa cremea; hyphis intricatis, hyalinis, sinuosis, articulatis, breviter et irregulariter ramosis, 5-6 \( \mu \) cr., subinde leniter asperulis; ascis copiosissimis, dense conglobatis ex hyphis nascentibus, interdum glomerufatis, subglobosis, 6-8 \( \mu\) diam., tunica tenui hyalina praeditis, 6-8-sporis; sporidiis sphaeroideis 2,5-3 µ diam. e latere leviter depressis, in asco conglobatis, hyalinis, levibus, sulculo diametrali, ut videtur, notatis.

Hab. in pennis et ossibus avium: Perdicis, Phasiani exsiccatis in sabulosis, La Panne Belgii. - Fructificatione species in mentem revocat statum ascophorum Gymnoascacearum et Aspergillacearum, sed fabrica ascomatis recedit et inter Onygenae species sessiles militare potest; forte genus Onygena in posterum dividi poterit. -Species dicata Elisae Bommer, natae Destrée (1832-1910), de studio mycetum belgicorum meritissimae.

## Fam. 7. Gymnoascaceae Baran. (Plectascineae p. p.)

GYMNOASCUS Baran. — Syll. VIII p. 811, X p. 67, XI p. 437, XIV p. 824, XVI p. 805, XVIII p. 195.

1. Gymnoascus confluens Sartory et Bainier, Bull. Soc. Mycol. de Fr. 7056 XXIX (1913) p. 261, tab. XII. - Mycelio hyalino, subdichotomice ramoso; glomerulis ascorum rubro-aurantiacis, copiosis, saepe confluentibus; ascis ex ramulorum hypharum spiraliter convolutorum orientibus, globosis, 12-13 µ diam., octosporis, confertis; sporis levibus, globosis vel sublenticularibus, 5-6 × 4-4,5; chlamydosporis seriatim dispositis, demum sphaeroideis, coloratis.

Hab. in stercore canino et in petalis Asteris sinensis, in Gallia,

2. Gymnoascus suhumbrinus A. L. Smith et Ramsb., Trans. Br. Mycol. 70. Soc. V (1917) p. 424.— Glomerulis globosis, ad 500 μ latis, fulvo-umbrinis; filamentis peridii irregulariter ramosis, saepe anastomosantibus, fenestratis; hyphis brevibus, brunneis, ad apices interdum hyalinis, septatis, 4-5 μ latis; ascis globosis 7-8 μ diam.; sporidiis sphaericis, levibus, hyalinis v. demum fulventibus, 3-4 μ cr.

Hab. ad terram, Isariae farinosae associatus ex Chiswick, Britanniae (G. F. Hook). — Verisimiliter e reliquiis larvae cujusdam ortus.

3. Gymnoascus Racovitzae Lagarde in Biospeol. XXXII, 1913, p. 281 7058 t. XII f. 1-6. Myxotrichum Racovitzae Lagarde l. c. p. 280. — Caespitulis albis, minutis 0,5-2 mm. diam., gossypinis; sessilibus v. substipitatis; hyphis laxe intertextis, cylindraceis 2-4 μ diam., hyalinis, septatis, copiose ramosis, sursum sinuosis apiceque in longas speciosasque spiras desinentibus, saepe granulosis; ascis in racemos inter hyphas digestis; muco obvolutis, octosporis; sporidiis sphaericis exiguis, levibus, 1,5-3 μ diam., 1-4-guttulatis.

Hab. in fragmentis ligneis et reliquiis putridis insectorum in speluncis St. Paul-de-Fenouillet, Galliae merid., et Lerida Hispaniae.

- PHANEROASCUS Baudys, Prinos Flori Gljiva, in Glasn. zemaljsk. Muz. u Bosni i Herceg., 30., 1918, p. 320. Mycelium septatum, hypophyllum, arachnoideum. Perithecia imperfecta globulosa, monasca, sub vitro hyalinula; sporidia ellipsoidea muriformia, fusco-brunnea.
- 1. Phaneroascus quercinus Baudys, l. c. cum icon. Mycelio evane- 7031 scente, peritheciis imperfectis subglobosis, sparsis vel aggregatis, epiphyllis, in maculis pallidis insidentibus; e microstomis albis oculo nudo ut atra puneta, 23-38 μ diam., in foliorum pagina inferiori aparientibus; membrana tenui, hyalina, 2 μ cr.; ascis octosporis, globulosis, magnitudine formaque cum peritheciis identicis; sporidiis initio subhyalinis, dein fusco-brunneis, ellipticis, anguste limbatis muraliter polyseptatis, medio constrictis, 17-20 μ long., 8-8,5 μ lat., exosporio laevi; paraphysibus nullis.

Hab. in foliis vivis Quereus Schneideri Vierh. in Hercegovina, in silvis « Dubrava » prope Domanovie (K. Malij).

PODOCAPSIUM F. E. Clements, Genera of Fungi 1909, p. 94, 176.— 7060 Est *Podocapsa* polyspora.— Typus *P. diffusum* Van Tieg. (Syll. VIII p. 821).

## Fam. 8. Tuberaceae

GENEA Vitt. - Syll. VIII p. 873, XXII p. 590.

1. Genea intermedia H. M. Gilkey, Rev. Tub. Calif., in Univ. Calif. 7061 Publ. Bot. v. 6., 1916, n. 11, p. 303, 344, tab. 29, fig. 14. — Hydnocystis compacta Hk. nec Genea compacta Hk. — Ascomatibus rubro-fuscis, lente lobatis, ad superficiem papillis rotundatis usque ad 0,3 mm. diam. indutis; caverna fere simplice, pariete interna lobos parvos externos parallele sequente; corticibus primis et secundis prorsus pseudoparenchymaticis; hymenio raro fasciculis tecti sterilis interrupto; ascis cylindricis aliquando inter sporas constrictis,  $44 \times 300$ ; sporis 1-seriatis, globosis,  $36 \mu$  diam. juvenilibus levibus hyalinisque, maturis asperis papillis semiglobos et minutis, ad  $5 \mu$  altis usque in spora singula variantibus, saepe irregulariter anastomosantibus; paraphysibus  $4 \mu$  crassis inter ascos stricte in fasciculis aggregatis.

Hab. ad terram sub L i b o c e d r o, Alta, Placer Co., California, Amer. bor.

2. Genea Gardnerii H. M. Gilkey, Rev. Tub. California, in Univ. Calif. Publ. Bot. v. 6., 1916, n. 11, p. 301, 343, tab. 28., fig. 7-8.— Ascomatibus nigris, 1-1,5 cm. diam., multo rugosis plicatisque, superficialiter minute verrucosis; caverna ascomatis valde irregulari ob implicationes sed non saepe ob projecturas parietum, textis corticis externi pseudoparenchymaticis intus in hyphas horizontales anastomosantesque transformatis; hymenio textis sterilibus interrupto; ascis cylindricis aut plus minusve clavatis, inter sporas non constrictis, ad stipitem saepe elongatam attenuatis, 34-42 × 280-425, sporis 1-, aut rare imperfecte 2-seriatis, aliquando tantum 3-4 maturantibus, globoso ellipsoideis, 30-34 × 32-36, superficialiter papillis latis (8 μ), humilibus et semiglobosis dense vestitis papillis ipsis plus minusve minute papillosis; paraphysibus facie irregularibus cum cellulis nonnullis elongato-cylindricis, aliis brevibus tumidisque, 3-9 μ diam., ramosis.

Hab. ad terram sub Quercubus, pluribus locis Californiae, Amer. bor.

3. Genea cubispora E. A. Bessey et B. E. Thompson, Mycologia 12., 7063 1920, p. 284, tab. XX. — Ascocarpis in sicco 7.9 mm. diam. 5.8 mm. alt., udis parum majoribus, cerebriformibus, involutionibus leniter subradiantibus praeditis, isabellinis arescendo castaneis; su-

perficie farinacea puberula, mycelio parce circumdata, intus cavitate unica irregulari, dein centro aperta; parietibus 700-800  $\mu$  cr., parte exteriori (100-150  $\mu$  cr.) pseudoparenchymatica, caeterum hymenifera; hymenio continuo non areolato; ascis cylindraceis apice rotundatis basi abrupte angustatis 300-350  $\approx$  25-30, paraphysibus filiformibus septulatis ascos 75-150  $\mu$  superantibus obvallatis, octosporis; sporis monostichis subcuboideis 27-28  $\approx$  24-28, apicalibus parum longioribus, 36-42  $\approx$  24-28, endosporio 1,2-3  $\mu$  cr., episporio lateraliter 0,2-4  $\mu$  caeterum crassiori 2-4  $\mu$ , in sporis apicalibus usque 5-10  $\mu$  cr., levi.

Hab. ad terram in humo foliaceo Aceris saccharati, Tsugae canadensis, Betulae Inteae, Abietis balsameae, in montibus Cisco Lake, Gogebic County Michigan, Amer. bor. (BESSÉY et DARLINGTON).

4. Genea Harknessii H. M. Gilkey, Rev. Tub. California, in Univ. Calif. 7060 Publ. Bot. v. 6., 1916, n. 11, p. 300, 343, tab. 29., fig. 11-13. Ascomatibus atro-fuscis usque atris, 2 cm. diam., compressis, lente lobatis, superficialiter projectis pyramidalibus robustisque basi usque ad 1 mm. altis indutis; caverna ascomatis projectis irregularibus e pariete interne multo dissecta; textis corticis externi pseudoparenchymaticis prorsus ad hymenium hyphas ostendentibus, cellulis externis magnis, obscuris et parietibus crassis; hymenio frequenter duplici, e conjunctione projectorum internorum parietum, a fasciis textorum sterilium cortices coniugentium; ascis cylindricis aut lente clavatis, non inter sporas constrictis, stricte stipitatis,  $32 \times 225$ ; sporis 1-aut imperfecte 2-seriatis,  $22-24 \times 28$ , superficialiter papillatis; papillis semi-globosis aut exigue truncato-conicis usque ad 4 µ latis altisque, vulgo in crassitudine altitudine, et distributione usque in spora eadem variabilibus, paraphysibus 2-8 µ diam., sub cortice secundario ramosis.

Hab. ad terram humosam, pluribus locis Californiae, Amer. bor.

## HYDNOCYSTIS Tul. - Syll. VIII p. 876, XVI p. 809.

1. Hydnocystis californica H. M. Gilkey, Rev. Tub. California, in Univ. 7065 Calif. Public. Bot. v. 6., 1916, n. 11, p. 289, 343, tab. 29 fig. 9.— Ascomatibus 1 cm. in diam., subglobosis, dilute vel atro-fuscis, perfecte clausis, mycelio brunneo septato ramoso cinctis, ad superficiem projectis pyramidatis basi 1,5 mm. diam. instructis; gleba alba; texto superficiali intus per gibbos pseudoparenchymatico, cellularum externarum parietibus lente incrassatis; cellulis

externis passim in pilis septatis productis; texto pseudoparenchymatico intus in hyphas transformato et hyphis prorsus ad hymenium eximie angustatis; ascis cylindricis, inter sporas lente constrictis, ad stipitem plus minusve distinctam attenuatis, 16-24 » 240,8-sporis; sporidiis globoso-ellipsoideis, levibus, 18-20 × 22-24, 1-seriatis; paraphysibus gracilibus 4-6 a crassis, in longitudine ascos aequantibus aut aliquando ascos leviter irregulariterque superantibus, septatis, apice exigue tumefactis; odorem sacchari usti ostendentibus.

Hab. in sabulosis sub Pinea, Ingleside San Francisco Co., California, Amer. bor.

#### GEOPORA Harkn. - Syll. VIII p. 877.

1. Geopora grayeolens Obermeyer, Mycol. Centrlbl. III (1913) p. 3.— 7066 Ascomatibus irregulariter tuberiformibus, depressiusculis, cerebriformi-sulcatis, usque ad 6 cm. diam., carnoso-siccis; exoperidio 0,6-0,7 mm. crasso, luteo-brunneo, villoso, pilis luteolis, septatis, 12 µ circ. crassis; endoperidio luteo-plumbeo; hymenio albido-sordido, anguste sinuoso, compacto; ascis cylindricis, 210-230 × 21; paraphysibus brevioribus, septatis, apice non dilatatis; sporis monostichis, ellipsoideis, levibus, hyalinis, 18 \* 12. Odor ut in Choeromyces meandriformis.

Hab. gregaria in solo calcareo ad caudices Pinor úm vetustorum, Schwarzwald in Wurthemberg, Germania (leg. A. Bertsch).

2. Geopora annulata H. M. Gilkey, Rev. Tuber. California in Univ. 7067 Calif. Public. Bot. v. 6., 1916, n. 11, p. 335, 346, tab. 28 fig. 6.— Ascomatibus rubro-fuscis et nigris, subglobosis aut paululum elongatis, 2-2,5 cm. longis, valde rugosis, superficialiter verrucosis, dense tomentosis, textis corticis externi crasse pseudoparenchymaticis; gleba plicis magnis laxis tenuibusque composita, plerumque textis hyphalibus e cortice descendentibus impleta; finibus plicarum liberis, dilatatis; ascis cylindricis, inter sporas valde constrictis et parietibus valde annulatimque incrassatis, 16-20 × 140-160; sporis levibus, 1-seriatis, globoso-ellipsoideis, 14-18 × 22-26; paraphysibus apice non tumidis 4-6 µ crassis.

Hab. in sabulosis, Golden Gate Park, San Francisco California, Amer. bor.

3. Geopora magnifica H. M. Gilkey, Rev. Tuber. California, in Univ. 7068 Calif. Public. Bot. v. 6., 1916, n. 11, p. 334, 346, tab. 30 fig. 35.— Ascomatibus rubro-fuscis, fere globosis, 4-10 cm. diam., minute

verrucosis, dense tomentosis comparative planis, lobis paucis humilibusque sed cortici aliquando in interiore longe (rarissime totaliter) penetrante, cavernam magnam plerumque hymenio noncontinuam formante; parietibus cavernae valde plicatis et textis corticalibus tomentosis indutis; gleba compactis plicis aliquando anastomosantibus composita, plicis textis corticalibus tomentosis completis; ascis cylindricis, inter sporas non constrictis,  $20 \times 180$ ; sporis levibus, 1-seriatis', ellipsoideis,  $14\text{-}18 \times 24$ ; paraphysibus quam ascis paululum brevioribus, lente tumidis, 6 µ crassis.

Hab. in terra Moraya Ridge, Alameda Co., California, America boreali.

# HYDNOTRIA Berk. et Br. — Syll. VIII p. 879, XVI p. 813.

1. Hydnotria ellipsospora H. M. Gilkey, Rev. Tub. California, in Univ. 7000 Calif. Publ. Bot. v. 6., 1916, n. 11, p. 307, 344, tab. 30., fig. 38. Ascomatibus purpurascente-brunneis, 1,5 cm. in diam., subglobosis, plicis laxis compositis, superficie minute pilosis; glebae cavernis connectis, latis angustisve, ascis paraphysibusque valliformibus indutis; paraphysibus in hyphis apice paululum tumidis ad foramina distincte trasformatis; aseis cylindricis inter sporas non constrictis,  $10 \times 260$ ; sporis 1-seriatis, ellipsoideis,  $10 \times 14$ , minute papillosis; paraphysibus ultra ascos non prominentibus,  $2.5~\mu$  latis.

Hab. ad terram sub Quereus agrifolia (Cupuliferae), Pacific Grove California, Amer. bor.

HYDNOTRYOPSIS H. M. Gilkey, Rev. Tuber. California, in Univ. Calif. Publ. Bot. v. 6., 1916, n. 11, p. 336, 346. -- Ascomata subglobosa compacta, lobata, cortice nonnumquam in glebam profunde penetrante; gleba plicis minutis compactis et irregularibus, nonnumquam anastomosantibus et fossas longas labyrinthiformesque et cuticula clausa separantibus composita, externe ascis et paraphysibus valliformibus vestita; asci cylindrici, 8-spori; spora globoso-ellipsoidea minute papillosa.

1. Hydnotryopsis Setchellii H. M. Gilkey, l. c. p. 338, 346, tab. 30 fig. 7070 21, 36.— Ascomatibus argillaceo-luteis, compactis, puncto adjuncto myceliali destitutis, 1,5 cm. diam., lobatis, minute et profunde ru. gosis, cortice passim in interiorem profunde penetrante, superficie minute scabrosis; gleba plicis minutis irregularibusque nonnumquam anastomosantibus, venas longas angustas e ramosas fossas labyrinthiformes et cuticula hymenio ascis paraphysibusque valli-

formibus vestita formantibus composita; textis corticis pseudoparenchymaticis; textis aut corticis venisque hyphalibus; ascis eylindricis, 8-sporis, 12 × 40; sporis globoso-ellipsoideis, in magnitudine uniformibus, 10-11 × 12-13, minute papillosis.

Hab. in silvis, loco ignoto Californiae, Amer. bor.

#### PIERSONIA Harkn. - Syll. XVI p. 812.

1. Piersonia bispora H. M. Gilkey, Rev. Tuber. California, in Univ. 7071 Calif. Public. Bot. v. 6., 1916, n. 11 p. 328, 345, tab. 28 fig. 5.— Ascomatibus ad 8 cm. (vulgo 6 cm.) diam., subglobosis, ferruginosis interdum maculas albas ostendentibus, ad superficiem glabris, aliquando parce ciliatis; gleba alba areis coloratis destituta; cortice crasse irregulariterque hyphali, hyphis irregulariter densis saepe ut pilis ultra superficiem prominentibus; hyphis texti subcorticalis gracilibus, compactis, plus minusve parallelis; venis externis longis, labyrinthiformibus, augustis; venis internis plerumque quam areis hymenialibus latioribus, plerumque hyphalibus, raro pseudoparenchymatice transformatis; ascis clavatis, longe stipitatis, 60-79 × 76-92, 1-2-(raro 3-4-) sporis, a paraphysibus fasciculatis et apice tumidis separatis; sporis globosis, luteis aut brunneis dense alveolatis, alveolorum parietibus sicut latis aut dimidiis quam cavernis alveolorum, alveolis 10-11 trans diam., sporis 28-30 μ; paraphysibus apice 6-8 μ diam.; odore plantarum vivarum carnis dessicatae nucis palmae indicae, sed plantarum siccarum casei cremoris aetate provecti simili.

Hab. sub Pino radiata (Coniferae), U. C. Campus, Berkeley California, Amer. bor.

TUBER Mich. — Syll. VIII p. 882, X p. 81, XI p. 443, XVI p. 813, XVIII p. 206.

1. Tuber argenteum H. M. Gilkey, Rev. Tub. California, in Univ. Ca-7072 lif. Publ. Bot. v. 6., 1916, n. 11, p. 318, 345, tab. 30 fig. 28. (corr. argentea). - Ascomatibus corneis argenteo-albis, areis sparsis colore obscurioribus, 3 mm. -2,5 cm. diam., depressis, irregulariter convolutis et saepe minute rugosis, superficialiter planis aut per trajectus rugarum in areas minutas dissectis cum pilis brevibus septatis et obtusis; gleba subfusca venis albis ramosisque induta; textis corticis pseudoparenchymaticis aut crasse et laxe hyphalibus; textis subcorticis hyphis laxis et irregulariter positis compositis; venis internis in structura strato subcorticis similibus; venis ex-

ternis internisque ad junctionem cum pericarpio valde dilatatis; ascis breviter stipitatis estipitatisve, semiglobosis,  $64-78 \times 76-92$ , 1-4-(vulgo 1-2-) sporis; sporis obscuro-fuscis, ellipsoideis, alveolatis, alveolis  $8-9 \times 9-10$  trans diam.; sculptura sporarum  $4 \mu$  alta.

Hab. in sabulosis inter folia Pini attenuatae (Coniferae), Ingleside, San Francisco Co. California, Amer. bor.

2. Tuher Shearii Harkness in W. A. Murrill, Mycologia 12., 1920, p. 158, cum icon.— Ascocarpis parvis, rotundatis v. leniter elongatis; superficie levi, cremmeo-coriaria; gleba avellanea, venis minutis; ascis numerosis, subglobosis, 50-70 μ diam. 1-3-sporis; sporis globosis v. subglobosis, obscure brunneis, alveolatis, in alveolis minute reticulatis, 28-49 μ diam.; alveolis 5-10 × 5-6 latis.

Hab. sub Pino inopi (Coniferae), Takoma Park Maryland, Amer. bor. (C. L. Shear). — Tub. unicolori proximum sed caracteribus sporarum diversum.

3. Tuber irradians H. M. Gilkey, Rev. Tub. California, in Univ. Calif. 709. Publ. Bot. v. 6., 1916, n. 11, p. 316, 344, tab. 29., fig. 16-17. — Ascomatibus fuscis, 1,5 cm. diam., depresso-globosis, paululum lobatis, superficialiter minute verrucosis areolis sparsis crassius verrucosis; gleba primo alba deinde brunnea, venis paucis parce ramosis, albis; textis corticis pseudoparenchymaticis cellulis ordinibus plus minusve distincte radiantibus ordinatis; textis subcorticis laxe hyphalibus; venis internis hyphis parallelis, separatis laxeque instructis; ascis aliquando longe stipitatis piriformibus, elongatis aut subglobosis, 44-64 × 76-92, 1-3 (vulgo 1-2) sporis; sporis ellipsoideis, 36-48 × 40-56, alveolatis, alveolis 3-8 × 3-9 (vulgo 7 × 8) trans diam., sculptura sporarum 4-6 μ alta.

Hab. in terra sub Quercus agrifolia (Cupuliferae); Dimond Canyon, Alameda Co. California, Amer. bor.

4. Tuber separans H. M. Gilkey, Rev. Tuber California in Univ. Calif. 705

Publ. Bot. v. 6., 1916, n. 11 p. 315, 344, tab. 29., fig. 19.— Ascomatibus plumbeo-purpureis, 1 × 1,2 cm., semiglobosis, convolutis, superficialiter minute verrucosis, venis inconspicuis; textis corticis externi pseudoparenchymaticis interne compacte hyphalibus gradatim transformantibus; venis internis compactis, hyphis parallelis, saepe anastomosantibus, aliquando pseudoparenchymaticis; ascis breviter stipitatis, semiglobosis, 56-68 × 60-92, 1-3 (raro 4-) sporis; sporis alveolatis, alveolis 5-10 × 7-11 trans diam.

Hab. in terra argillosa sub Quercubus, Laundry Farm, Alameda Co. California, Amer. bor.

5. Tuber levissimum H. M. Gilkey, Rev. Tub. California, in Univ. Calif. 7076
Publ. Bot. v. 6., 1916, n. 11, p. 313, 344, tab. 30 fig. 31.— Tuber
Borchii Kk. nec Vitt. — Ascomatibus argillaceo-brunneis, 2 cm.
diam., regularibus, superficie levibus; gleba dilute brunnea, venis
magnis colore inconspicuis; textis corticis vix pseudoparenchymaticis, hyphis parallelis plus minusve coalescentibus ad hymenium
laxe connectis compositis; venis internis compactis, structura ad
textas corticis approximatis; ascis subglobosis vel globosis, 50-80
× 70-100, 1-4 sporis; sporis dilute brunneis, globoso-ellipsoideis,
32-40 × 36-52, alveolatis; alveolis magnitudine et numero in sporis
variabilibus, 3-10 × 4-13 trans diam., sculptura 4 μ crassa.

Hab. ad terram sub Quercubus, California, Amer. bor.

6. Tuber unicolor H. M. Gilkey, Mycologia 12., 1920, p. 100, fig. 1.— 7077 Flavo-brunneum 1-2 cm. diam., e parum convolutum quandoque profunde sulcatum. Superficie minutissime scabra; gleba flave-scente et minute albo-venosa; contextu corticali externo minute pseudoparenchymatico; peridio 400-600  $\mu$  cr.; venis internis structura subcorticis conformibus, hyphis 4-6  $\mu$  cr.; venis externis conspicuis, longis, ramosis, diametro duplo crassioribus quam internis, hyphis 6  $\mu$  cr.; ascis semiglobosis, 56-64  $\times$  48-56, 1-4-sporis; sporidis flavis, globoso-ellipsoideis, 22-40  $\times$  20-38, alveolatis, 3-4 usque 6-7 alveolis visibilibus in diametro, sculpturis 4-5  $\mu$  cr.

Hab. superficialiter ad terram prope Quercus, America bor.— Cum Tub. dryophilo, T. maculato, T. rapaeodoro comparandum sed characteribus plurimis diversum.

7. Tuber Gardnerii H. M. Gilkey, Rev. Tub. California in Univ. Calif. 7078 Publ. Bot. v. 6., 1916, n. 11., p. 317, 345, tab. 30 fig. 30. — Ascomatibus fuscis 1,5 cm. diam., subglobosis, leviter convolutis, superficialiter verrucosis; gleba primo alba deinde pallide fusca; venis latis conspicuis, albis; textis corticis crasse pseudoparenchymaticis; textis subcorticis hyphis separatis parallelisque; venis internis hyphis tenuibus, separatis et parallelis; ascis non stipitatis, semiglobosis, raro elongatis, 56-68 × 80-88, 1-5-sporis; sporis pallide brunneis, globosis aut elongato-ellipsoideis -24-30 × 28-48, alveolatis, alveolis 3-11 × 5-14 trans diam., sculptura sporarum 4-6 μ alta.

Hab. in terra sub Arbutus Menziesii (Ericaceae), et Quercus agrifolia (Cupuliferae), California, Amer. bor.

8. Tuber canaliculatum H. M. Gilkey, Mycologia 12., 1920, p. 99, fig. 7079
1. — Syn. Tub. Borchii Kauffman non Vitt., Rep. Mich. Ac. Sc.

12., 1910, p. 216.— Brunneum. Superficie papillis polygonis parvis depressis distincte tecta; venis conspicuis albidis; cortice pseudoparenchymatico-subfilamentoso, hyphis superficie subparallelis extus parum piliformiter prominentibus; peridio 360-520  $\mu$  cr.; venis internis angustis subinconspicuis ex hyphis irregulariter dispositis 4-6  $\mu$  cr. efformatis; ascis breviter stipitatis e hemisphaericis cylindraceis 96-120  $\times$  72-88, 1-3 (plerumque 2-)-sporis; sporidiis obscure brunneis ex ellipsoideis subglobosis, 48-72  $\times$  40-52, alveolatis, 4-5 usque 7-8 alveolis visibilibus in diametro; sculpturis 4-6  $\mu$  cr.

Hab. in sabulosis silvaticis, Allegan Co., Mich., U..C. Coll., A. merica bor. (C. H. KAUFFMAN).

## Fam. 9. Cyttariaceae Lév.

CYTTARIA Berk. - Syll. VIII p. 4, XVI p. 695.

1. Cyttaria Espinosae Lloyd, Mycol. Notes, n. 48 (1917) p. 673 fig. 995.— 7080 Ascomatibus irregulariter globosis, subsessilibus, vegetis probabiliter rubescenti-aurantiis, tenuibus, poris contiguis, parietibus vere subtilibus; ascis paraphysibusque stipatis parietalibus, non in fundo foveolarum; substantia pallida, submedullosa; sporidiis ellipsoideis, levibus, 8 × 5 (probabiliter immaturis).

Hab. in Chile, probabiliter pr. Santiago (MARCIAL R. ESPINOSA). — A speciebus affinibus videtur distincta alveolis contiguis, substantia molli etc.

## Fam. 10. Helvellaceae Pers.

Subfam. 1. Morchelleae Sacc.

MORCHELLA Dill.— Syll. VIII p. 8, X p. 1, XI p. 391, XIV p. 738, XVI p. 695, XVIII p. 2, XXII p. 597.

1. Morchella tasmanica J. Ramsbottom in L. S. Gibbs, Phytogeogr. 7081 Tasmania, Journ. of Ecology 8., 1920, p. 107.— Ascomate oblongoconico, acuto, c. 3 cm. longo, 1,5 cm. crasso, basi stipitis diametrum vix excedente, pruinoso, costis primariis longitudinalibus, subparallelis, acie obtusis, atro-castaneis, alveolis fulvis, secundariis transversis, pliciformibus, irregularibus; stipite subaequali et ad basim non incrassato, versus apicem parum crassiori, c. 9 cm. longo, 1 cm. crasso, fulvo velutino, toto brevi tomento fulvo tecto; pilis variabilibus, septatis, ad apicem vix incrassatis, c. 20 μ crassis; ascis

cylindraceis, ad basim subattenuatis, octosporis,  $350-400 \approx 22-24$ ; sporis late ellipsoideis, hyalinis vel hyalino-ochraceis,  $27-32 \approx 15-16$ ; paraphysibus ramosis, septatis, hyalinis vel hyalino-ochraceis, ad apicem vix incrassatis,  $15-17~\mu$  crassis.

Hab. in terra uda, in silvis Eucalypti, Mons Dromedary. New Norfolk, Tasmania. — Sec. Rodway, Pap. a Proc. R. Soc. Tasmania f. Year 1920, (1921) p. 158, a M. exculenta L. differt capitulo magis cylindraceo et sporis latioribus.

2. Morchella conica Pers. — Syll. VIII p. 9 — var. serotina Peck in 7082 N. Y. State Mus. Bull. 157 (1911) p. 50 et 112 (1912). — Pileo conico vel irregulari, apice subacuto vel late rotundato, interdum perforato, saepe sterili et brunnescente, costis acie albidis, stipite minute squamuloso. Serotina, autumnalis.

Hab. ad terram, Roslindale, Mass., Amer. bor. (U. C. Sherman et J. F. Conant).

**HELVELLA** L.— Syll. VIII p. 17, XI p. 391, XIV p. 740, XVI p. 697, XVIII p. 3, XXII p. 599.

1. Helvella capucinoides Peck in N. Y. State Mus. Bull., 157. (1911) 7083 p. 27 et 111 (1912). — Ascomate tenui, lento, submembranaceo, vulgo subbilobato, uno lobo erecto altero deflexo, margine nudo, libero, involuto, lobo inferiore stipitem circumdante, subtus albo, ruguloso, 0.5-2,5 cm. lato; hymenio fuliginoso-ochraceo, deinde brunneo vel ochraceo-brunneo; stipite gracili, firmo, aequali, subteretifareto vel cavo, pruinoso, pubescente, candido, 2,5-7 cm. longo, 2-4 mm. crasso; ascis cylindraceis, 240-280 × 18-20; sporidiis oblongis vel ellipsoideis, monostichis, 1-nucleatis, hyalinis, 20-28 × 12-16; paraphysibus filiformibus apice clavatis.

Hab. gregaria ad terram in silvis Thujae occidentalis, North River, N. Y., Amer. bor. — Ab H. capucina Quel. differt praecipue ascomatis forma margineque nudo.

VERPA Sw.—Syll. VIII p. 29, XIV p. 741, XVIII p. 6, XXII p. 601.

1. Verpa Krombholzii Corda, Syll. VIII p. 31 (V. helvelloides). — var. 7084 morchelloides J. Grelet, Notes Mycolog. in Le Monde des Plantes XVIII, 1917, n. 105, p. 42, cum icon. — A typo differt hymenio rugoso, margine sinuoso-lobato, sporis paulo majoribus (22-25 × 13-15).

Hab. ad terram in sepibus et silvis, prope arbores Cerasi, Savigné (Vienne), Gallia.

#### SPRAGNEOLA Massee. - Syll. XIV p. 742.

1. Spragneola mucida Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 708 1919 (1920) p. 114, tab. 26.— Ascomatibus sessilibus subglobosis, vage nodulosis 5 mm. circ. diam., hypogaeis in ligno marcido ortis, albis; hymenio totam superficiem tegente; ascis cylindraceis octosporis; sporis globosis, crasse echinulatis, 18 μ diam.; monostichis, paraphysibus ascos eximie superantibus, filiformibus apice attenuatis, muco denso immersis et senescendo copiosiore.

Hab. in terra, M. Nelson Range, Tasmania.

### \*) Subfam. 2. Geoglosseae Sacc.

#### Sect. 1. Hyalosporae

MICROGLOSSUM Sacc. — Syll. VIII p. 39, X p. 2, XI p. 392, XIV p. 742, XVI p. 698, XVIII p. 6, XXII p. 602.

1. Microglossum nudipes Boud. in Bull. Soc. Myc. Fr. XXXIII (1917) 7086 p. 16, tab. VI fig. I. — Caeruleo-olivaceum, 3-5 cm. altum; clavula longe fusiformi, rarius obtusa, compressa aut plurisulcata, hymenio glabro a pediculo vix distincto, subolivacea, pediculo omnino glabro, levi, caerulescente, clavulae paullo breviore, ad basim non pallidiore; ascis clavatis, basi leviter attenuatis, 150-160  $\times$  10-12, octosporis, foramine marginato; paraphysibus simplicibus vel divisis, hyalinis, ad apicem non vel vix incrassatis, 0,5-2  $\mu$  spissis; sporidiis hyalinis, fusiformibus, rectis vel leviter arcuatis, non septatis, primo 4-6-guttulatis denique guttulis oleosis evanescentibus, 17-30  $\times$  5-7.

Hab. ad terram, Ham et Savigné, Gallia.— M. viridi affinis sed stipite omnino glabro etc. distinctum.

CUDONIELLA Sacc.— Syll. VIII p. 41, XI p. 392, XVI p. 698, XVIII p. 7, XXII p. 7.

1. Cudoniella minima Rost. et Lind, Fungi Dan. p. 91 t. I fig. 13 et 7087 II fig. 14 (1913).— Ascomatibus carnosis, firmulis, hemisphaericis, glabris, subtus plicis tenuibus, paucis distantibus, decurrentibus, tenuiter inflexo incarnato-rubro, 0,7 mm. diam.; stipite teretiusculo, recto, concolore, 0,5-1 mm. longo; ascis clavatis, 80-88 \* 12-14, apice

<sup>\*)</sup> Cnfr. LLOYD, The Geoglossaceae, Cincinnati 1916.

rotundatis, jodi ope immutatis, paraphysatis; sporidiis ellipsoideooblongis, 16-19 × 7-8, hyalinis.

Hub, in caule folisque Dierani scoparii in Dania.

HAPLOCYBE F. E. Clements, Genera of Fungi 1909, p. 91, 175.— Est 7088
 Cudoniella hyalospora nec hyalophragmici. — Typus C. aquatica Lib.,
 Syll. VIII p. 42.

## Sect. 2. Phaeophragmiae

GEOGLOSSUM Pers. - Syll. VIII p. 42, X p. 2, XIV p. 743.

1. Geoglossum spathulatum Massee, Bull. Bot. Garden Kew 1908, p. 6.— 7089 Ascomatibus spathulatis arcte compressis, distinctis, farctis, nigris, pilosellis, 1-1,5 cm. altis, 2-3 mm. crassis; stipite subaequali, e medulloso farcto, mox cavo dein subcompresso, velutino, concolore, 3-4 cm. alto, 2 mm. circ. crasso; ascis cylindraceo-subclavatis, octosporis, 80-90 \* 9-10, jodi haud tinctis, paraphysibus filiformibus, septatis, capitatis, sursum brunneo-tinctis obvallatis; sporidiis cylindrico-clavatis, dilute brunneis, multiseptatis, utrinque acutis, 65-70 \* 5-6.

Hab. ad terram in horto botanico, Singapore (RIDLEY). — G. glabro Pers. proximum; differt ascomatibus valde compressis, pilosellis et sporidiis longioribus multiseptatis.

### Sect. 3. Scolecosporae

CUDONIA Fr. - Syll. VIII p. 50, XVI p. 700, XVIII p. 9.

Cudonia convoluta A. Yasuda in Lloyd, The Geogl. p. 18 fig. 803-7090 805 (1916).— Ascomate carnoso hemisphaerico, inflato, convoluto, 5-6 mm. diam., pallide brunneo; stipite 2-3 em. longo, sursum tenuiore, striato, concolori; sporidiis filiformi-clavatis, 25-30 μ longis; paraphysibus hyalinis, filiformibus apice non incrassatis.

Hab. fasciculata ad terram in Japonia (A. Yasuda).— Intermedia inter gen. Cudoniam et Mitrulam, sed primae affinior.

2. Cudonia japonica A. Yasuda in Lloyd, Geogl. p. 17 fig. 801 (1916). — 7091 Tota 2,5-6 cm. alta; ascomate applanato, margine involuto 1-2,5 cm. lato, supra brunneo, levi, infra pallidiore, radiatim sulcato; stipite pallido, cavo, saepe compresso, sursum plicato-hirto, 2,2-5,5 cm. alto, 2-5 mm. cr.; ascis 150-170 × 12-14; clavatis; sporidiis filiformibus, 70-80 × 2, hyalinis; paraphysibus filiformibus.

Hab. ad terram in Japonia (YASUDA).— A C. circinante statura et sporidiis multo longioribus differt.

3. Cudonia orientalis A. Yasuda in Lloyd, Geogl. p. 18 (1916). — Asco 709 mate 6-8 mm. diam., carnoso, pallide brunneo, margine incurvato; stipite gracili, concolori, siccitate nigricanti; sporidiis intra ascum pallide stramineis circ. 50 μ long.; paraphysibus filiformibus, hyalinis.

Hab. ad terram in Japonia (YASUDA). — Affinis sed distincta a Cudonia circinanti.

# \*) Fam. 11. Pezizaceae Fr.

## Sect. 1. Hyalosporae

ACETABULA (Fr.) Fuck.—Syll. VIII p. 59., XVI p. 701, XVIII p. 13, XXII p. 609.

Acetabula sulcata (Fr.) Fuck. — Syll. VIII p. 62 — var. pinetorum 7093
 R. Maire, Bull. Soc. Hist. Nat. Afr. Nord VIII, 1917, p. 177; Mycoth. Bor.-Africana f. XI, n. 271 (1917); Schedae in Bull. Soc. Hist.
 Nat. Afr. du Nord VIII, 1917, p. 249.— A typo differt cupulis subsessilibus v. stipite brevissimo praeditis, basi parce sulcatis; ascis 280-400 × 15-20; sporidiis 120-25 × 12-15.

Hab. ad terram in silvis Pini halepensi et P. Pineae (nec in fagetis ut typus), Algeria (Tell) Africae bor. (R. MAIRE), nec non in Horto bot. neapolitano (CESATI in Rabenhorst, F. Europ. n. 2407).

2. Acetabula unicolor Boud., Bull. Soc. Myc. Fr. XXXIII (1917) p. 14, 7094 tab. II fig. III. — Ascomatibus mediis, 3 cm. latis et altis, fuliginosis, breviter stipitatis, extus minutissime verruculosis, costis concoloribus, extremitate parum ramosis, fossulas elongatas formantibus, non albidis; stipite brevissimo concolore; paraphysibus elongatis, ad apicem leniter incrassatis, coloratis; ascis cylindraceis, ad basim subattenuatis, octosporis, 300-350 × 18-20; sporidiis ellipsoideis, medio uniguttulatis, 17-21 × 12-14.

<sup>\*)</sup> Cnfr. K. v. Keissler, Revision des Sauterschen Pilzherbars. Mit besonderer Berücksichtigung der von Sauter neubeschriebenen Pilze, in Ann. k. k. Naturhist. Hofmus. Wien, Bd. XXXI, 1917, pp. 77-138,

Hab. ad terram nudam, locis apertis Savigné (Vienne), Gallia (GRELET).

SPHAEROSOMA Klotzsch. - Syll. VIII p. 56, XVIII p. 11, XXII p. 608.

1. Sphaerosoma tasmanica Rodway, Pap. a. Proc. R. Soc. Tasmania 7095 f. Year 1919 (1920) p. 115. — Hypogeum, dein subemergens, globoso-convolutum e ochraceum albescens 1 cm. diam., carnoso-cartilagineum, cavum, clausum v. uno latere ad basim aperiens; hymenio superficie interna omnino tegente; ascis linearibus octosporis; sporidiis monostichis, ellipsoideis utrinque obtusis, crasse echinulatis, 24 × 16; paraphysibus filiformibus apice capitato-globosis.

Hab. ad terram, Cascade, Hobart, Tasmania.— Habitus Hydnocystis cyclosporae sed sporis diversis etc.

#### RHIZINA Fr. - Syll. VIII p. 57.

1. Rhizina atra Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 1920 7096 (1921), p. 158. — Discoidea, nigra, plana, undulata, margine excepto fibrillis mycelicis limitata, extus pruinosa, plerumque 1 cm. diam., tenaci; ascis cylindraceis octosporis; sporidiis monostichis, late oblongis, obscure brunneis, crasse verrucosis, 22 × 12; paraphysibus filiformibus, apice clavatis, brunneis.

Hab. ad terram in silvis, Mac Robie's Gully, Tasmania. — Ob sporidiis brunneis potius ad Aleurinam vel Phaeopeziam ducenda.

**GEOPYXIS** Pers. — Syll. VIII p. 63, X p. 3, XI p. 383, XIV p. 744, XVI p. 702, XVIII p. 14, XXII p. 610.

1. Geopyxis pallidus Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7097 1920 (1921), p. 154.— Cupulatus, 5-8 mm. diam. anguste stipitatus 10 mm. long., undique albus, tenuis carnosus extus levis v. leniter farinaceus, margine brunnescenti breviter irregulariterque fimbriato; hymenio levi, ascis linearibus, sporis uniseriatis, oblongis, 22-24 \* 10, hyalinis minute verrucosis; paraphysibus filiformibus.

Hab. ad terram, M. Welson, Tasmania.

2. Geopyxis acetabularioides Spegazzini, Rev. Chilena Hist. Nat. XXII 7098 1918 p. 10, fig. 7-10. — Mediocris, hemisphaerica, 20-25 mm. diam. 15 mm. alta, margine modice dilatato-reflexa, breviter crassiusculeque stipitata, stipite longitrorsum 10 mm. × 3-5 mm., 3-5-costato vix reticulato fulta, ubique glabra avellanea disco tamen palli-

diore; ascis cylindraceis 250  $\mu$  long, dense paraphysatis; sporis mediocribus ellipticis eximie denseque papillato-arcolatis, 20-24  $\times$  13-14, jodi ope nulla.

Hab. ad terram muscosam, prope Victoria, America austr. (J. A. CAMPO).

PEZIZA Dill. em. — Syll. VIII p. 73 et 511, X p. 3, VI p. 393, XIV p. 744, XVI p. 703, XVIII p. 16, XXII p. 611.

1. Peziza congregata (Wak.) Sacc., Plicaria congregata Wakef., Niger. 7099 Fungi III, in Kew Bull. Miscell. Inform., 1917, n. 3, p. 109. — Ascomatibus subcupulatis v. demum convexo-expansis, undulatis, 0,5-1,5 cm. diam., extus verrucosis, brunneis, disco concolore; ascis cylindraceis breviter stipitatis, octosporis, 230 × 15-17, parte sporcire. 110 μ longa; paraphysibus hyalinis, simplicibus sursum clavatis ad 6-8 μ latis; sporidiis globosis grosse verrucosis pallide fuscescentibus, 15-16 μ diam.; hypothecio et excipulo pseudoparenchymatico; hypothecii cellulis ad 80 μ diam., excipuli minoribus; cellulis exterioribus brunneis, hine inde in verrucas aggregatis.

Hab. ad ligna marcida, Gambari Forest Reserve, Nigeria, Africa trop. (C. O. FARQUHARSON).

2. Peziza erythraea Sacc., Notae Mycol. XXII p. 190 (R. Acc. Pad. 700 1917). — Ascomatibus subsparsis, plano-scutellatis, glabris, subcarnosis 1 cm. latis (in sicco), sessilibus, v. subsessilibus, centro affixis, extus subalutaceis, disco plano-concavo, rubro-aurantiacis, margine tenui, inflexo, excipulo parenchymatico flavido; aseis cylindricis deorsum parum tenuatis, 120-140 × 7-8, parte sporif. superna, 50 μ longa, octosporis; paraphysibus (an aseis inevolutis?) bacillaribus, hyalinis; sporidiis recte monostichis, exacte ellipsoideis, 7-8 × 4,5, levibus, hyalinis, dilutissime roseolis, non guttulatis.

Hab. ad terram silvaticam, Dongollo, Ghinda, alt. 100 m., Erythraea.— Ab affini Pez. luteo-nitente B. et B. (Cooke Mycogr. fig. 205) differre videtur disco rubro-aurantio, nec luteo-nitente, sporidis paullo minoribus, non 2-guttatis, ascomatibus siccitate inflexis, paraphysibus spuriis, loco.

3. Peziza bananincola (Rehm) Saccardo, Plicaria bananincola Rehm, 7101 Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2234.— Ascomatibus gregariis, sessilibus, primitus globoso-clausis, mox urceolatis, dein orbiculariter demumque irregulariter explanatis, 1-5 cm. latis, disco ab initio crasse marginato, albidulo, excipulo extus fuscidulo, albido-pruinoso, glabro, parenchymatice contexto, siccis

complicatis involutisque, albescentibus; ascis cylindraceis, apice rotundatis,  $150 \times 12\text{-}14$ , jodii ope valde, imprimis ad apicem, coerulescentibus; paraphysibus filiformibus 3  $\mu$  cr., versus apicem oblongo-clavatis, usque ad 15  $\mu$  latis, hyalinis; sporidiis monostichis, oblongis, utrinque rotundatis, levibus, non guttatis,  $18\text{-}20 \times 9$ .

Hab. ad Bananam emortuam, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

- OTIDEA (Pers.) Fuck. Syll. VIII p. 94, X p. 4, XI p. 394, XIV p. 560, XVI p. 507, XVIII p. 20, XXII p. 616. Syn. Jolidea F. E. Clements, Genera of Fungi 1909, p. 89, 175. Est Otidea jodata; typ. O. pleurota Phill., Syll. VIII p. 97.
- 1. Otidea violacea A. L. Smith, Trans. Br. Mycol. Soc. V (1916) p. 237.— 7102 Ascomatibus substipitatis, uno latere elongatis, extus furfuraceis, extus intusque violaceis, ad 6 cm. latis; ascis cylindraceis, 300 × 10, apice jodo coerulescentibus; paraphysibus linearibus vel tenuiter clavulatis; sporidiis ellipsoideis, hyalinis, biguttulatis, 10 × 5.

  Hab. ad solum hortense, Warwick, Britannia (W. B. Grove).

GALACTINIA Cooke -- Syll. VIII p. 106, XI p. 395, XIV p. 748, XVI p. 708, XXII p. 619.

1. Galactinia Mairei Boud., Bull. Soc. Myc. Fr. XXXIII (1917) p. 14, 7103 tab. IV fig. VI. — Pro genere minor aut media, 1-2 cm. lata, sessilis, umbrina, subtus pallida, levis; paraphysibus ad apicem incrassatis, fuliginosis, 5-6 μ crassis; ascis cylindraceis, 220-260 × 10-15, basi paululum attenuatis, octosporis, apice jodo coerulescentibus; sporidiis ovatis, hyalinis, levibus, guttulis duabus sat parvis donatis, 12-14 × 9-10, maturitate extrema vix perspicue subtiliter verruculosis, guttulis evanescentibus.

Hab. in carbonariis vetustis, Algeria (MAIRE).

2. Galactinia hypoleuca Boud. et Torr., Bull. Soc. Mycol. Fr. 1911, 7104 p. 127, t. IV f. 1. — Media aut major, 2 cm. 0,5 ad 4,5 lata, sessilis, extus albida, sublaevis, intus brunnea. Receptaculum primo cupulatum, dein expansum, applanatum, extus albidum aut pallidum, glabrum, ad marginem vix furfuraceum; hymenio brunneo aut fuliginoso. Paraphyses septatae, simplices aut divisae, ad apices incrassatae, fulventes. Thecae jodo coerulescentes, elongatae, cylindricae, ad basim vix attenuatae, octosporae, 300·350 μ longae, 15-20 crassae. Sporae oblongo-ovatae, hyalinae, extus minute verrucosae intus guttulâ oleosâ magnâ, unicâ et 2-3 minoribus comi-

tatâ, rarius conjunctis, et tunc 2-guttulatae, 22-25 × 11-13.

Hab. ad terram prope Lisbonne, Lusitania (REV. TORREND).

3. Galactina torrendiana Boud., Bull. Soc. Mycol. de Fr., 1911, p. 128 710 t. IV f. II.—Media, 1-3 cm. lata, sessilis, extus fulvocastanea, furfuracea, intus fuliginosa intensive colorata. Receptaculum primo capulare, dein applanatum, plus minusve regulare, extus sat grosse furfuraceum praecipue ad marginem, fulvo-brunneum, hymenio brunneo-nigrescente. Paraphyses simplices, aut ad basim divisae, septatae, ad apices incrassatae, fulvescentes aut fulvo-olivaceae. Thecae, jodo coerulescentes, majores, cylindricae, olivaceo tinctae, octosporae, ad basim vix attenuatae, 350-400 μ longae, 18-20 crassae. Sporae ovatae, minute verrucosae, uni- aut vulgo 2-guttulosae, guttulis crassioribus, longitudine 17-20 μ latitudine 10-12 aequantes.

Hab. ad terram, Lisbonne, Lusitania (REV. TORREND).

- PYRONEMA Carus Syll. VIII p. 111, X p. 5, XI p. 396, XIV p. 748, XVI p. 710, XVIII p. 23, XXII p. 620.
- Pyronema confluens Tul. Syll. VIII p. 107.— var. inigneum W. 7106
   H. Brown, Amer. Journ. of Bot. II, 1915, n. 6, p. 297. A typo differt notis tantum biologicis v. physiologicis.

Hab. ad terram, Johns Hopkins Univers., Amer. bor.

2. Pyronema? megalopotamicum Speg., Mycet. Argent. VI, Anal. Mus. 7107 Nac. Buenos Aires XXIII (1912) p. 100.— Ascomatibus dense gregariis sed numquam confluentibus, carneis, hemisphaericis, supra planissimis, 2-5 mm. diam., margine acutis, integris vel vix erosulo-denticulatis, subiculo arachnoideo albescente tenuissimo insidentibus, apothecii contextu e cellulis majusculis 20-30 μ diam. globosis constituto; ascis subcylindraceis, apice rotundatis, basi modice pedicellatis, 200 × 15-20; paraphysibus filiformibus, aurantiis, apice articulo elliptico vel subpanduriformi 7-9 μ crasso terminatis; sporidiis oblique monostichis, cylindraceo-ellipsoideis, utrinque subacutiusculis, hyalinis, 20 × 10. Jodi ope nulla.

Hab. ad humum et residua organica vegetabilia combusta, in insulis Rio Paranà prope Ibicuy, Argentina— An melius Humaria?.

- HUMARIA (Fr.) Fuck. em.— Syll. VIII p. 118, X p. 4, XI p. 396, XIV
  p. 749, XVI p. 710, XVIII p. 28, XXII p. 623.
- Humaria mollispora Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7108 1920 (1921), p. 158. — Hemisphaerica, sessilis, carnosa, hyalinapurpurascenti, 1 mm. diam., excipulo levi parenchymatico, disco

plano; ascis cylindraceis, octosporis; sporis elliptico-fusoideis, levibus, hyalinis forma subirregularibus, tunica tenuissima praeditis, 18 × 5; paraphysibus filiformibus apice breviter clavatis.

Hab. ad terram, Cascades Hobart, Tasmania. — Hum. omphalodes Massee proxima.

2. Humaria perpusilla Peyronel, Nuovo Giorn. bot. it. N. S. 25., 1918, 7109 p. 420, flg. 17-21. — Ascomatibus gregariis, superficialibus minutissimis, nudo oculo vix conspicuis, 150-450, plerumque 200-300 µ latis, glabris, sub microscopio rugulosis, primum fere clausis, sphaeroideis vel turbinatis, mox explanatis, cupulatis vel patellatis, siccis subcoriaceis, margine involuto discoque concavo, laete aurantiaco-miniatis, udis pallidioribus, nempe in cremeo vel ochroleuco vergentibus, disciformibus hymenioque plano vel subconvexo, carnoso-gelatinosis, pellucidis; excipuli contextu pseudoparenchymatico, e cellulis irregulariter polygonis, 5 10 \mu latis constituto; ascis paraphysatis, oblongo-subclavatis, apice primum truncatulis, dein rotundatis, pedicello mediocri donatis, 25-30 \* 3, octosporis; sporidiis oblique monostichis, ellipsoideis, saepe guttulatis, hyalinis, 3-3,5 × 2; paraphysibus filiformibus, inferne parce ramosis vel etiam simplicibus, 1,5-2 µ crassis, apice piriformi vel subsphaeroideo-inflatis, ascos parte incrassata, 2,5-3,5 \(\mu\) lata superantibus.

Hab. in ramis truncisque decort. vel semidecorticatis Coryli Avellanae, Richaretto (loco dicto La Roccia, 1200 m. alt.) in Vallibus Valdensibus pedemontanis, Italia bor. — Species ascomatibus, ascis sporidisque pusillis facile dignoscenda.

3. Humaria luteola Torrend, Broteria, Bot., v. XII, 1914, fase. I, p. 66 7110 (Fung. sel. exs. 272). — Minuta, luteola (Klincks. Cod. C. 216), 1,5·5 mm. lata, primum leviter cupularis, deinde expansa, margine aequali; ascomata solitaria v. saepius aggregata; ascis cylindraceis 200·230 × 8·10 ad basim sensim attenuatis; paraphysibus linearibus 2·2,5 μ cr.; sporidiis ellipsoideis, 12·13 × 8·9, levibus intus granulosis ex granulis irregulariter in 2·3 lateralibus v. excentricis acervis v. saepius in uno centrali dispositis, pulchre botryoideis, fere totam superficiem episporii occupantibus.

\*Hab. ad terram humosam in silvis Coniferarum praecipue laricinis, Cintra Bemfica, Lusitania.

Humaria longispora R. Maire, Mycoth. Bor.-Africana, fasc. XI n. 270, 7111 (1917); Schedae, in Bull. Soc. Hist. Nat. Afrique du Nord, VIII, 1917, p. 247, fig. 5. — Carpophoris sessilibus, solitariis vel gregariis, ex urceolato cupuliformibus, dein explanatis patelliformibus,

carnosis, 1-4 mm. diam., 2-2,5 mm. hymenophoro extus pilis adpressis vestito, hymenio subconcolore vel pallidiore margine albescente plus minusve fimbriato; hymenio aurantiaco; carne pallidiore. Ascis subcylindricis, operculatis, infra apicem subtruncatum leviter attenuatis, basi longius attenuatis, octosporis, 240 300 \* 20-33, parte sporifera 150-230 \(\mu\); ascosporis monostichis, rarius distichis, valde elongatis, oblongo-ellipsoideis vel subcylindricis, hyalinis, laevibus, tenuiter tunicatis, contentu centro granuloso et apicibus glycogenifero farctis, 29-40 × 11-15; paraphysibus basi dichotome ramosis et anastomosantibus, 4.5 \mu crassis, pauciseptatis. apice incrassato clavulam subcylindricam 8-10 µ crassam abrup. tiuscule constrictam, rarius clavulam attenuatam efformanti, contentu aurantiaco. Pilis marginis et exterioribus subhyalinis septatis, apice plus minusve incrustatis, rarius-fasciculatis, usque ad 300-350 µ longis. Jodi ope nullibi coerulescit, sed in apicibus ascosporarum, in epiplasmate, nec non in hyphis subhymenialibus glycogenum ostendit.

Hab. ad terram museosam in Mauretania, Africae bor. (R. MAIRE).

5. Humaria conformis Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 7112 Botany VI (1914) p. 2233.— Ascomatibus gregariis, sessilibus, primitus globoso-clausis, dein urceolatis, demum explanatis, disco orbiculari tenuissime marginato, pallide aurantiaco-flavo, 1-2 mm. diam., extus glabris, excipulo parenchymatice contexto, ad basim hyphis nonnullis hyalinis obsesso; ascis cylindraceis, apice rotundatis, 3-sporis, 120 × 9, J-; paraphysibus filiformibus, hyalinis, 2 μ cr., apice incrassatis, 4-6 μ latis; sporidiis monostichis, ellipsoideis, hyalinis, levibus, biguttatis, 10-12 × 6-7.

Hab. ad fragmenta vegetabilia putrida et ad terram, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO). — P. deformi Karst. proxima.

6. Humaria Raimundoi Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 7113 of Sci. VIII (1913) p. 192. — Ascomatibus solitariis, juvenilibus fere cyathoideis, mox disco patelliformi, plano, crasse marginato, dein irregulariter explanato, demum vario modo complicato et extenso, sanguineo-rubris, extus glabris, subalbatis, centro plus minusve late affixis, carnosis, 0,5-3 cm. diam.; ascis cylindraceis, apice rotundatis, usque ad 300 × 12, octosporis, paraphysibus filiformibus 2  $\mu$ , apice 3  $\mu$  cr., hyalinis obvallatis; sporidiis monostichis, ellipsoideis, utrinque rotundatis, glabris, hyalinis, continuis, guttis 1 vel 2 magnis praeditis, 15-18 × 8-10.

Hab. in ligno decorticato, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

7. Humaria caballina Rehm, Ascom. Philippin. VII, in Leafit. of Phi- 7114 lippin. Bot. VIII, 1916, p. 2930. — Apothecia congregata, sessilia, primitus globoso-clausa mox patellaria, irregulariter complicata, crasse marginata, -1 cm. lata, disco rubro, excipulo glabro, avellaneo, crasse parenchymatice contexto, flavido, cellulis externis 5 μ latis, sicca extus subrugulosa; ascis cylindraceis,  $60-70 \times 6-8$ , 8-sporis, J. Sporis ellipsoideis, 1-cellularibus, interdum biguttula. tis, glabris, hyalinis,  $5.6 \times 4$ , 1-stichis. Paraphyses filiformes, 1,5  $\mu$ ad apicem 2,5 µ latae, rubrae. Color ruber in aqua solvitur.

Hab ad stercorem equinum, Mt. Maquiling, Ins. Philip. (Dr. E. B. COPELAND). — Magnitudine apotheciorum insignis, itemque minutie sporarum accedit ad Hum. Guanaci Rehm. et H. merdariam Fries.

8. Humaria Carota Boedyn et v. Overeem, in Hedw. 1917 (1918) p. 309, 7115 tab. II fig. 2-4. — Ascomatibus gregariis v. sparsis, rubro-miniatis, pallidius marginatis, 4-5 mm. lat., sessilibus, initio globosis, clausis, mox circulari apertis et discum applanatum ostendentibus, denique convexis et immarginatis, levibus, raro irregularibus sublobatis, extus roseis, pilosulis; ascis clavato-cylindraceis, 170-220 × 12-19, apice rotundatis, 8-sporis; sporidiis ellipsoideis, rotundatis, monostichis, eguttatis, 15-20 × 8-10; paraphysibus bacillaribus septatis, sursum valde dilatatis, rotundatis, interdum obtuse bilobis, 11-20 µ cr. ibique e carotina soluta aurantio-rubentibus, nec non crystalla acicularia carotinica rubris, 20-50 μ longa, continentibus.

Hab. in fime vaccine pr. Fort Uitermeer pr. Weesp., Neerlandia. — Paraphysibus crystalla carotinae eximia (an normaliter) continentibus mox dignoscenda species. Ascis jodi ope immutati.

9. Humaria granulata (Bull.) Quél. — Syll. VIII p. 129 — var. micro. 7116 spora Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 405. — Ascomatibus 1-2 mm. latis; sporidiis oblongis utrinque rotundatis, eguttatis, hyalinis,  $10-12 \approx 4-4.5$ .

Hab. ad fimum alicujus herbivori, Luzon, Prov. Laguna Mt. Banajao, ins. Philipp. (E. B. COPELAND).

10. Humaria coprogena Sacc., Ann. Mycol. XII, 1914, p. 291.— Asco-7117 matibus fimicolis, mox late apertis, plano-scutellatis, sessilibus, glabris, 0,5-1,5 cm. latis, subsolitariis, extus levibus brunneolis, de. mum saepe undulatis, margine acuto vix crenulato, disco (vegeto) laete vinoso-flavo, sublevigato, excipuli contextu ex cellulis ampliu-

sculis, 15-20  $\mu$  diam. dilute ochraceo-brunneis conflato; hymenio toto ochroleuco; ascis cylindricis, apice rotundato-truncatis, sensim longe tenuato-stipitatis, 170-190  $\approx$  9-10 (p. sporif. 80  $\mu$  long.), jodi ope immutatis, octosporis, paraphysibus filiformībus apice vix crassiorībus et brunneolis; sporidiis oblique monostichis, ellipsoideis, levibus, 14,5-15  $\approx$  7,5-8, e hyalino dilutissime fuscidulis, farctis.

Hab. in fimo putrescente equino, socia Humaria Petrakii M. Weiss. kirchen, Moravia (F. Petrak). — Pluribus speciebus proxima, e g. H. semimmersae, H. Keithii, H. Ripensi sed satis diversa. Selerotium nullum.

11. Humaria Petrakii Sacc., Ann. Mycol. XII, 1914, p. 291.— Ascomatibus sparsis, fimicolis, scutellato-disciformibus, majusculis orbicularibus, 5-10 mm. diam., applanatis, disco dilute sordideque rubescente, margine angusto parce revoluto nigricante ex hyphis relaxatis tereti-fusoideis, 90·100 × 5-9, brunneis efformato; ascis cylindricis apice obtusis, operculatis, jodo non tinctis, 140-150 × 9-9,5, parte sporif. 90-100 μ longa, octosporis, paraphysibus filiformibus non v. vix clavulatis, guttulatis, hyalinis obvallatis; sporidis rectemonostichis, ellipsoideis 11-13 × 7-7,5, eguttulatis, hyalinis, levibus.

Hab. in fimo coacervato, sat recenti equino pr. M. Weisskirchen, Moravia (F. Petrak). — Pluribus affinis, sed distincta. Ab Hum. Chateri differt sporidiis levibus, paraphysibus non clavatis, hyalinis et habitatione; ab Hum. maurilabra differt ascomatis margine non crispato-crenato, sporidiis brevioribus, statione etc.; ab Hum. merdaria disco non badio, ascomate non glaberrimo, multo majori, non umbilicato etc.

12. Humaria phagospora Flag. et Lort., Bull. Soc. Mycol. Fr. 1914, 7119 p. 222, t. XII f. I.— Minuta, 0,5-1 mm. lata, sparsa, sessilis, plana vel subconvexa, teuuiter marginata, aurantio-carnosa, humiditate decolorata, glabra, pruinosa; hymenio concolore; ascis cylindraceis, ad basim, brevissime attenuato-stipitatis primo octosporis, demum tetrasporis 140 × 12; paraphysibus simplicibus, septatis, granulis aurantiacis repletis, ad apicem sensim incrassatis, 4 μ latis; sporis primo 6-8 in unâquâque thecâ, tunc laevibus, sed bene conformatis et quandoque guttulis unâ vel duabus dotatis dein quatuor tantum in maturo statu, et tunc granulato-asperulis vel acutis verrucosis, ovatis, continuis hyalinis et guttulâ oleosâ sat amplâ, saepius unica, raro duabus, inaequalibus, fetis, 18 × 11.

Hab. ad terram argillaceam et udam inter muscos parvulos, Clessy, Gallia.

13. Humaria ovalispora (Boud.) Saccardo, Pulvinula ovalispora Boud., 7120 Bull. Soc. Myc. Fr. XXXIII (1917) p. 16, tab. V fig. III.— Minuta, 2-3 mm. lata, sessilis, glabra, aurantio-miniata, unicolor, carne pallidiore; ascomatibus lentiformibus, non marginatis; paraphysibus gracilibus, dichotomice divisis, ad apices non incrassatis et curvatis, intus granulis oleosis aurantiacis irregulariter repletis; ascis cylindraceo-clavatis, 160-200 × 13-15; sporidis ellipsoideis, levibus, intus ad extremitates granulosis, 14-17 × 7-9.

Hab. ad terram nudam in Algeria (MAIRE).

14. Humaria Jeannelli (Lagarde) Saccardo, Pustularia Jeannelli Lagarde 7121 in Biospeleolog. XXXII, 1913, p. 287, t. XIII f. 10-12.— Ascomate, sessili, concavo, rarius applanato, 4-6 mm. diam., dilute aurantiaco, extus pallidiore tomentello margine integro brunneolo; ascis operculatis, cylindraceis, 180-200 × 10-12, deorsum tenuatis, 8 sporis, apice jodi ope caerulescentibus; paraphysibus filiformibus minute guttulatis, hyalinis; sporidiis monostichis ovato-ellipsoideis, 18-20 × 8-10, levibus, intus granulosis, hyalinis.

Hab. ad terram in speluncis in prov. Huesca, Hispaniae.

15. Humaria glacialis (Rehm), Saccardo, Plicaria glacialis Rehm, Ann. 7122 Mycol. XI, 1913, p. 396. — Apothecia gregaria, primitus globosoclausa, dein patellaria, crasse marginata, ad basim valde constricta, -1 cm. lata, purpureo-fusca, extus glabra, pagina inferiore pallidiore. Asci cylindraceo-clavati, apice rotundati, S-spori, -200 × 20, J +. Sporae ellipsoidene, utrinque acutatae, glabrae, 1-magniguttatae, hyalinae, 20 × 9, 2- versus basim 1-stichae. Paraphyses filiformes, septatae, 3-4 μ, ad apicem clavatae -8 μ, fuscae.

Hah. ad terram prope Albertus, « British Am. Great Glacier, » (BRUCE FINK). — Pl. purpurascenti (Pers.) proxima.

16. Humaria subturbinata Rehm in Rick, Ann. Mycol. IX, 1911, p. 183 7123 (nomen nudum).

ASCODESMIS v. Tiegh. - Syll. VIII p. 824, XVIII p. 29, XXII p. 627.

1. Ascodesmis porcina Seaver, Mycologia VIII, 1916, p. 3. — Ascomatibus perminutis, vix visibilibus, sparsis v. subgregariis, initio subglobosis dein expanso-subdiscoideis, extus pallidis, vix 0,5 mm. diam.; hymenio alte convexo dein fusco, demum (ob sporidia) nigricante; excipulo fere nullo; ascis late clavato-ovoideis, basi abrupte tenuatis, 75-90 × 25-35; sporidiis octonis, biseriatis, v. in apice asci conglobatis, subglobosis, initio hyalinis, levibus, demum e fusco brunneis 10-13 μ diam., rarius 12-13 × 10-11, irregulariter

verruculosis, medio anguste simpliciter v. furcato-costulatis; paraphysibus brevibus, sursum elavulatis,  $5 \mu$  cr.

Hab. in excremento por cino ex Porto Rico et N. Jersey; culta in laboratorio horti bot. New York, Amer. bor.

BARLAEINA Sacc. — Syll. VIII p. 111, X p. 5, XI p. 396, XIV p. 748, XVI p. 710 (sub nom. *Barlaea*), XVIII p. 23, XXII p. 621.

Barlaeina verrucosa (Rodway) Sacc., Barlaea Rodw. Pap. a. Proc. 7125
 R. Soc. Tasmania f. Year 1920 (1921), p. 158. — E hemisphaerica plana, sessilis, chermesina, carnosa, 1 mm. diam.; excipulo parenchymatico praedita; ascis cylindraceis octosporis; sporidiis monostichis, globosis, 20 μ diam., verrucis magnis hemisphaericis tectis, byalinis; paraphysibus angustis, clavulatis, chermesinis.

Hab. ad terram, Cascades, Hobart, Tasmania.

2. Barlaeina inearnata (Duv. et Maire) Saccardo. Caloscypha incarnata 71π Duvern. et Maire, Bull. Soc. H. N. de l'Afr. du Nord 1917, p. 179.—
Ascomatibus sessilibus, 0,5-1 cm. lat., carnosis, fragilibus, cupulatis, dein expansis, extus margineque furfuraceo-pruinosis (sub lente) basi albidis, versus marginem incarnatis v. brunneo-vinosis; hymenio ex incarnato pallido roseolo, carne non v. vix hygrophana, tenui, albida, inodora, sapore miti; ascis octosporis, operculatis, subcylindraceis, apice truncatis, basi subattenuatis, 135-160 × 8-10; paraphysibus apice ramosis, septatis, hyalinis, 3-5 (apice) μ cr.; sporidiis monostichis, hyalinis, levibus, globosis, 6-8 μ diam., tenui, tunicatis, pluriguttulatis.

Hab. in solo humoso et quisquiliis sub Eucalyptis, pr. Souma Mauretaniae, Afr. bor. — Ascomata vetusta, margine incarnato excepto, albida.

3. Barlaeina Lortoni (Boud.) Saccardo, *Plicaria Lortoni* Boud. in Bull. 7127 Soc. Myc. Fr. XXXIII (1917) p. 15, tab. V fig. I. — Minuta, sessilis, cinnamomeo-fuliginosa, 3-5 mm. lata; ascomatibus vix urceolatis, dein applanatis, sat crassis, extus minutissime furfuraceis, cinnamomeis, hymenio saturatiore, carne concolore sed pallidiore; paraphysibus rectis, non vel vix septatis, sub microscopio leniter tinctis, 3-5 μ crassis; ascis late clavatis, octosporis, 200-250 × 22-28; sporidiis perfecte rotundatis, albis, levibus, intus guttula unica saepe divisa aut granulis comitantibus repletis, 15-16 μ diam.

Hab. in carbonariis Clessy, Gallia (LORTON).

PITHYELLA Boudier, Icon. Mycol. III, tab. 519. — Affine gen. Bar-

tacinae a quo verisimiliter tantum differt sporidiis sphaeroideis.— Typ. gen. Pith. hypnina (Quél.).

Pithyella hamata J. E. Chenantais, Bull. Soc. Mycol. de Fr., XXXIV, 7128 1918, p. 39., tab. HI fig. 3.— Ascomatibus udis ceraceis sessilibus urceolatis, turbinatis dein expansis, in sicco bi-v. tri-revolutis, 1 <sup>1</sup>/<sub>2</sub> -2 mm.; disco aurantiaco obscurante, paraphysibus exsilientibus punctato, a mycelio brunneo copioso, nonnunquam pseudo-stipitem efformante, ortis; extus pilis candidis intricatis brevibus uncinatis, 25-30 μ, in costas dispositis, ad marginem praecipue copiose vestitis (sub lente); ascis cylindraceis apice rotundatis, crasse stipitatis, 55-60 × 7-8, paraphysibus ramosis v. simplicibus obvallatis; sporidis monostichis hyalinis sphaericis magniguttulatis, 4 μ cr.

Hab. sub epidermide Buxi in cavis circa Triblydii hysterini stipites, la Roche prope Ruffec, Charente, Gallia. — Est Trichoscyphaea gen. Arachnopezizae proxima.

- \*) LAMPROSPORA De Not., Comm. Crittog. Ital. 1864, I p. 388 (Etym. lampros splendens, et spora). Ascomata Barlaeinae, h. e. scutellata, sessilia, minuta, saepius laete colorata, ascis octosporis, paraphysatis, sporidiis vero aeque sphaericis sed distincte areolatis, v. areolato-muricatis, hyalinis. Hue quoque ducendae species nonnullae Barlaeinae de quibus efr. suis locis.
- 1. Lamprospora ascoboloides Seaver, l. c. p. 10, t. 114, f. 8. Primum 7129 globosa et subimmersa dein graduatim aperta hymenio primum concaviusculo dein plano et maturitate convexo et indistincte marginato, plerumque vix 1 mm. diam. et saepe minori, crebre in depressionibus substrati nidulante sed nunquam tecta, aurantiaca, extus leniter floccosa, hymenio ob ascos latiores protrudentes rugoso demum ex ascis collabescentibus picto, saepe hymenio etiam collabescenti et tunc concavo; asci cylindraceo-clavati, circ. 175-225 × 18-20; sporis primum levibus 1-2 guttulatis, dein majoribus, maturis rugulosis, rugulis 2 μ cr., rectis v. plerumque curvatis nonnulis subparallelis afiis varie dispositis v. angulo recto dispositis, quandoque ramosis v. laxe et incomplete sub reticulatim dispositis, sporis 15-18 μ diam., hyalinis; paraphysibus clavatis, apice 5-6 μ diametro.

<sup>\*)</sup> Cfr. hujus generis expositionem monographicam cl. Seaver in Mycologia 6., 1914, p. 5-24 et tab. 114.

Hab. gregatim ad terram, Portland, Connecticut, New York, Virginia (Amer. bor.). — Sporae eis Ascoboli in mentem reddunt.

2. Lamprospora spinulosa Seaver, l. c., 11., t. 114 f. 5.— Minuta ple-713 rumque vix 1 mm. diam., primum clausa et subglobosa, dein aetate graduatim aperta et hymenio leniter convexo et margine fibrilloso limitato, extus leniter floccosa, hymenio ob ascos dimidium longitudinis protrudentibus rugoso, ascis demum collabescentibus; ascis elavato-cylindraceis circ. 200 × 18-20; sporidiis primum levibus, grosse uniguttulatis, dein delicate rugulosis et maturis, 15-20 μ diam., breviter obtuseque spinulosis, spinis 2-3 μ longis 1 μ cr., hyalinis; paraphysibus clavatis, septatis et intus granulosis.

Hab. gregatim ad terram inter museos, Horto Botanico New York, Amer. bor.

3. Lamprospora anulata Seaver, I. c., p. 11, t. 114 f. 9. — Primum 181 globosa et partim in substrato immersa dein expansa et hymenio plano v. subplano et plus v. minus pieto et rugoso, pallide aurantiaco, 0,5 usque 1 mm. diam.; ascis cylindraceis v. subcylindraceis, infra in pedicellum brevem contortum attenuatis, 200 μ long. et circ. 20 μ diam., primum farctis dein aetate dimidiam partem tantum sporidia gerentibus; sporidiis primum monostichis, sphaeroideis et juventute levibus et granuloso farctis, 12-14 μ diam., dein aetate extus rugam 3 μ cr. anulatim dispositam supra et infra parallele v. subparallele praeditis, coeterum minute verrucosulis et 16-18 μ diam., hyalinis; paraphysibus supra incrassatis (5 μ diam.) et dense granuloso farctis.

Hab. gregatim ad terram inter muscos et algas, Portland Connecticut, New York, Amer. bor.

4. Lamprospora maireana Seaver, l. c. p. 14, t. 114, f. 23.— L. tuber 712 culata Maire, nec Seaver, in Myc. bor. africana 1915 n. 22, p. 68 (cum descriptione). — Primum globosa dein expansa, maturitate hymenio plano v. concaviusculo, intus extusque omnino pallide aurantiaca, usque 2 mm. circ. diam.; ascis cylindraceis v. subcylindraceis, infra sensim stipitiformi attenuatis, 300-325 × 30; sporidiis monostichis, sphaeroideis, 23 μ diam. subhyalinis, primum levibus maturitate tuberculato-verrucosis seu verrucis submuriculatis 3-5 μ diam. praeditis; paraphysibus apice fortiter incrassatis et usque 8 μ cr.

Hab. gregatim ad terram inter muscos et algas, Algier, Africa bor., et New York, Amer. bor.

5. Lamprospora tuberculata Seaver, Mycologia 11., 1912, p. 47, tab. 7133

57 fig. 1-5.— Cfr. Maire, Schedae Myc. bor. afric. n. 22.— Ascomatibus minutis 1,5-2 mm. diam.; hymenio sensim ampliato demum plano v. leviter convexo, margine tenuiter fimbriato praedito, pallide aurantio, ob ascos protrudentes ruguloso; ascis cylindraceis operculatis 15-18 μ cr.; sporidiis globosis primum levibus et crasse uniguttatis dein rugulosis demum (maturis) grosse tuberculatis, 16 µ diam., hyalinis, tuberculis levibus; paraphysibus clavatis.

Hab. ad terram udam inter muscos, prope Yonkers, New York et New Yersey, Amer. bor. - A Barlaeina (Lampr.) maireana imprimis differt tuberculis sporidiorum levibus nec reticulatis.

6. Lamprospora tuberculatella Seaver, l. c. p. 15., t. 114 f. 6 -- Primum 7134 globosa apice dein aperta demum graduatim expansa et discoidea, supra convexa et floccosa et hymenio ob ascos protrudentibus subspinulosa, pallide aurantiaca, 0,3-0,5 mm. diam. raro usque 1 mm.; ascis cylindraceis v. subcylindraceis; sporidiis monostichis, primum levibus et centro grosse uniguttatis, maturando majoribus et 20 u circ. diam. et tuberculatis (20-25 tub. circa perimetrum sporidii); paraphysibus supra inflatis et granulis aurantiacis farctis.

Hab. gregatim ad terram inter muscos, prope Yonkers, New York, Amer. bor. - L. tuberculatae proxima sed differt tuberculis multo minoribus.

7. Lamprospora lutziana Boud., Bull. Soc. Myc. Fr. XXXIII (1917) 7135 p. 15, tab. V fig. II. — Minuta, 1-2 mm. lata, sessilis, hemisphaerica, extus glabra, submarginata, hymenio plano dein convexo; paraphysibus rectis, vix aut non ad apicem incrassatis, pallide coloratis, 8-10 \( \mu \) crassis; ascis clavatis, amplis, octosporis, 250-280 \* 20-25; sporidiis perfecte rotundatis, albis, primitus levibus dein minute verruculosis, guttula unica praeditis, 17-19 µ diam.

Hab. inter caespites Muscorum (Philonotis fontan a), Cantal, Gallia (LUTZ).

8. Lamprospora areolata Seaver, Mycologia, 4., 1912, p. 48, tab. 57 fig. 6-8. — Ascomatibus minutis 0,5-1 mm. diam., primum globosis irregulariter dehishentibus demum hymenio plano v. leviter convexo laete rubro ob ascos protrudentes plus minus ruguloso; ascis cylindricis 15-18 u cr. octosporis; sporidiis globosis primum levibus crasse uniguttatis demum rugulosis et profunde areolatis circ. 16 µ diam.; paraphysibus clavatis.

Hab. ad terram inter muscos in silvis, prope Yonkers, New York, Amer. bor.

9. Lamprospora insignispora (Boud.) Saccardo, Hümaria insignispora 7137

Bond. et Torr., Bull. Soc. Mycol. Fr. 1911, p. 131, t. V f. III. — Minuta, 2-4 mm. lata, aurantiaca; sporis ovatis, albis, verrucis oblongis tectis. Receptacula pulvinata, submarginata, subtus vix tomentosa; hymenio aurantio. Paraphyses simplices aut divisae, ad apices clavulatae, intus granulosae, aurantiacae. Thecae octosporae hyalinae cylindraceae, ad basim attenuatae, 220-240 μ longae, 16-18 μ crassae. Sporae achroae, papulis sat magnis cylindricis aut oblongis tectae, 18-21 μ longae, 15-16 μ latae.

Hab. ad terram Lisbonne, Lusitania (REV. TORREND).

10. Lamprospora tropica (Rehm) Saccardo, Plicaria tropica Rehm, A. 7138 scom. Philippin. VII, in Leaflt. of Philippin. Bot. VIII, 1916, p. 2931. — Apothecia gregaria, sessilia, primitus globoso clausa, dein cyathoidea, demum plus minusve explanata, integra, crasse marginata, hymenio dilute fuscidulo, excipulo fuligineo-fusco, vix verruculoso, ad basim -1 cm. lata, angustata, ibique nigrescentia, 2.4 cm. lata, 2 cm. alta, sicca valde complicata corrugataque, parenchymatice contexta, cellulis externis circa 15 μ latis; ascis cylindraceis, -200 × 9, 8-sporis, J-; sporis subfusoideis, areolato-verrucosis, 1-cellularibus primitus guttulis parvulis oleosis 1-2 instructis, hyalinis, 10-12 × 6-7, 1-stichis. Paraphyses filiformes 1,5 μ, ad apicem 2 μ latae et subcurvatae, dilute fuscidulae.

Hab. ad cinerem Bambusae cum stercore mixtum, Los Baños, Ins. Philip., (M. B. RAIMUNDO). — Pezizae phyllogenae Cke. similis sed imprimis sporis diversa. Sporis areolato-verrucosis parvulis insignis.

SARCOSCYPHA (Fr.) Sacc. — Syll. VIII p. 153, XI p. 398, XIV p. 753, XVIII p. 30, XXII p. 628.

1. Sarcoscypha minuscula Boud. et Torr., Bull. Soc. Mycol. Fr. 1911, 7139 p. 128 t. IV f. III.— Minutissima, stipitata 1-3 mm. lata albida, hymenio coccineo. Receptaculum stipitatum; extus ut pediculus albidum, vix tomentosum, cupulare, hymenio pulchre coccineo. Paraphyses graciles, rufescentes, ramosae, ad apices vix incrassatae. Thecae elongatae, octosporae, hyalinae, ad basim longe attenuatae operculatae, et ante operculum annulo prominente notatae, 300-370 μ longae, 13-15 spissae. Sporae hyalinae, late ovatae, regulares, laeves, guttulis oleosis duabus sat minoribus includentes, 15-17 μ longae, 11-12 latae.

Hab. ad ramulos putridos Juniperorum et Thuyarum, Lisbonne, Lusitania.

PILOCRATERA P. Henn. — Syll. VIII p. 130, XI p. 398 (sub nom. Trichoscypha), XIV p. 31, XVIII p. 31:

1. Pilocratera novo-guineensis Ramsbott. in Gibbs, Coutr. Phytogeogr. 7140 Arfak Mount. p. 185 (1917). — Rubra; ascomatibus ceraceo-carnosis, stipitato-cupulatis, 1,5-2 cm. diam., extus pruinosis, margine pilosis, quoque pilo e tubulis septatis hyalinis coalitis composito; cupula hemisphaerica, stipite compresso 3-3,5 cm. longo, 1 mm. cr. pruinoso; ascis cylindricis 320 × 15-16, breviter stipitatis, parte sp. 170 μ long. apice jodo non coerulescentibus, 8-sporis; sporidiis monostichis, fusoideo-ellipticis, 2-guttulatis, 23-28 × 12-15; paraphysibus cylindraceis, septatis, 5 μ cr.

Hab. in ligno putrido, pr. Manokoeari in Nova Guinea.

2. Pilocratera abnormis Peck in N. Y. State Mus. Bull. 150 [1910] p. 7141 37 (1911). — Cupulis sparsis, stipitatis, parvis, 1-4 mm. latis, obconicis vel acetabuliformibus, pallido griseis, minute pubescentibus; stipite 1-3 mm. longo, insititio vel basi bulbilloso, hirto, cupulae in colore simili; ascis subcylindraceis, 160-200 × 10-12, filiformi-paraphysatis; sporidiis oblongis vel subfusoideis, rectis vel leviter curvatis, utrinque leniter angustatis vulgo uninucleatis, 25-40 × 8-10.

Hab. in ligno decorticato Betulae luteae, Fine N.Y. nec non in ligno putrescente prope Ischpeming, Michigan, Amer. bor.

3. Pilocratera maxima Sydow, Ann. Mycol. X, 1912, p. 82. — Stipitata, ceraceo-carnosa, cupulato-infundibuliformis, extus albido-aurantiaca et levis, 2-5 cm. lata, ad marginem squamis setiformibus usque 1 mm. long. simplicibus obsita; stipite 2-2,5 cm. longo 2-4 mm. cr., glabro, levi, aequali, concolore; disco aurantiaco; ascis cylindraceis subsessilibus, apice rotundatis, 175-220 × 20-25, octosporis, aparaphysatis; sporidiis monostichis, ellipsoideis, utrinque leniter attenuatis v. rotundatis, continuis, hyalinis, intus guttufatis, 20-26 × 10-12.

Hab. ad ligna v. ramos (?), Hayoep, Borneo sud-or. (H. Wink-Ler). — P. amoenae proxima.

LACHNEA (Fr.) Gill. — Syll. VIII p. 166, X p. 5, XIV p. 754, XVI p. 716, XVIII p. 76, XXII p. 629.

 Lachnea (Cheylimenia) furcifera v. Höhnel, Ber. deutsch. bot. Ges. 7143 XXXV, 1917, p. 248 (nomen nudum). — A coeteris speciebus differt setulis partim 1-2 ramosis (cfr. Fragmente z. Mykol. 1022, in Sitzb. k. Ak. d. Wiss. Wien 1917). 2. Lacknea macrothelis Sydow, Engler' Botan. Jahrbüch., 54., 1916, 71 p. 258. — Ascomatibus sparsis, sessilibus, 3-6 mm. diam., mox discum planum miniatum nudantibus, extus brunneolis et, praecipue ad marginem, pilis 1-1  $^3/_4$  mm. longis castaneo-brunneis acutis septatis crasse tunicatis basi 30-40  $\mu$  crassis sursum angustioribus simplicibus vestitis, carnosis, in sicco pullidioribus; ascis cylindraceis, ad apicem obtusis, breviter stipitatis, 190-220  $\times$  15-17, octosporis; paraphysibus hyalinis, guttulatis, 2-3  $\mu$ , ad apicem clavato-incrassatis et 4-8  $\mu$  latis; sporidis recte monostichis, ellipsoideis, utrinque rotundatis, continuis, 21-25  $\times$  12-14, verrucis grossis (2-3  $\mu$  altis) semiglobosis, sed facile deciduis obsitis.

Hab. ad corticem muscosam, « Felsspitze », Nova Guinea nordor. Africae (LEDERMANN).

3. Lachnea fusispora v. Höh., Ann. Mycol. 15., 1917, p. 352; Ber. deutsch. in bot. Ges. 35., 1917, p. 250. — Ascomatibus sessilibus, sparsis, depresse-scutellatis, 4-5 mm. latis, 0,7-0,8 mm. cr., extus asperulis, brunneis, disco rubro; hypothecio parenchymatico e cellulis 20-40 μ diam. conflato, extus parvicelluloso, obscurato; excipulo 80-100 μ cr. parenchymatico vix extanti, prope marginia setis brunneis ornato et ambitu crenulato; setis discretis v. fasciculatis, 160-500 × 12-16, interdum longioribus, 6-10 septatis, apice subacutis; ascis cylindricis, 260-280 × 14, vix jodo tinetis; sporidiis monostichis, levibus, hyalinis, subfusoideis, utrinque rotundatis, crasse 1-guttatis, 21-26 × 10-11; paraphysibus filiformibus, sursum vix incrassatis, rubroguttulatis.

Hab. ad ligna putrida p i n e a pr. Karlsbrunn Silesiae (J. Weese). — Sporidiis fusoideis coloreque disci distinguenda species. Proxima L. gregariae R. et L. arctisporae Cooke.

4. Lachnea albo grisea Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 718 of Sci. VIII (1913) p. 193. — Ascomatibus gregariis, sessilibus, primitus globoso-clausis dein urceolatis, demum disco orbiculari crasse marginato, extus pilis sparsis, rectis, fusiformiter utrinque acutatis, fuscus, 2-3 septatis, 120·150 μ longis, medio 12-15 μ cr. obsessis, 1-2 mm. altis, 1-3 mm. diam., cinereo-albis, carnosis; ascis cylindraceis, apice rotundatis, octosporis, 150 × 12-14, paraphysibus filiformibus 2,5-3 μ, ad apicem usque ad 10 μ cr., hyalinis obvallatis; sporidiis monostichis, subglobosis (in asco), continuis, haud guttatis, glabris, hyalinis, 12 × 10.

Hab. ad humum ripae saxosae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (E. B. COPELAND).— Specimina non perfecte evoluta.

Pezizae (Sarcoscyphae) creteae Cke. affinis.

5. Lachnea nemorea v. Höhn., Fragm. z. Mycol. 853, in Stzgsb. Akad. 7147 Wiss. Wien CXXIII, 1, p. 114 (1914). — Ascomatibus 0,5-1,5 mm. latis, initio cupulatis dein applanatis, extus brunneolis, disco pallido, sicco luteolo, basi hyphis copiosis luteolis, curvulis, 5-8 p.cr. humo radicatis, extus setosis, setis lateralibus brevioribus, marginalibus copiosis, densis, rigidis, sursum obtuse rotundatis, 8 μ circ. crassis, hyalinis vel lutescentibus, 500 µ usque longis, septatis; ascis cylindraceis 200 × 12, jodi ope non coerulescentibus, paraphysibus copiosis, filiformibus, 2-3 μ cr., apice ad 4-5 μ clavato-inflatis obvallatis; sporidiis monostichis, ellipsoideis, utrinque attenuatis, obtusis, hyalinis, eguttulatis, 16.19 \* 9,5.12; hypothecio grosse parenchymatico, 300-400 µ crasso.

Hab. ad terram humidam prope Vindobonam, Austria.— A speciebus affinibus facile distinguitur setis longis et obtusis. — Est Trichariae spec. sec. Bond.

6. Lachnea austriaca Sacc. et Trott., Syil. XXII p. 634. - Lachnea (Me- 7148 lastiza) Boudieri v. Höhn. 1910 nec Torr. — Cnfr. etiam. v. Höhn. in Fragm. z. Mykol. 783, in Stzgsb. Akad. Wiss. Wien CXXI, 1, p. 405 (1912) tab. II fig. inf.; Rehm. Ascom. exs. n. 1876.— Ascomatibus gregariis vel confertis, disco cinnabarinis extus brunneis, rotundatis, margine tenui incurvato praeditis, siccis pallescentibus, usque ad 5.6 mm. latis; excipulo basi circ. 160 µ cr., marginem versus tenuiore, e cellulis 28.56 × 20-40, interioribus hyalinis exterioribus brunneis contexto, ad basim hyphis rhizoidalibus 8-14  $\upmu$ cr., curvis, saepe ramosis, brunneis praeditis, prope marginem setis brunneis, obtusis, 3-4-locularibus, 130 150 \* 9-10, brevioribus intermixtis obsitis; hypothecio hyalino 140-150 μ cr.; strato hymeniali  $250{\text -}350~\mu$  alto; ascis cylindraceis, sursum rotundatis, J.,  $250{\text -}300$ st 13.14, paraphysibus filiformibus 4  $\mu$  cr. apice oblongo clavulatis et 7 µ cr. obvallatis; sporidiis recte vel suboblique monostichis, ellipsoideis, grosse obtuseque verrucosis, apicibus papilla applanata ad 3 µ alta auctis, hyalinis, 20-22 × 15-16,5.

Hab. ad terram argilloso-calcaream prope Kalksburg in ditione Vindobonensi. - L. miniatae affinis -- Est Melastizae spec. sec. cl. Boudier.

7. Lachnea Boudieri (Grelet) Sacc., Trichophaea Boudieri Grelet, Bull. 7149 Soc. Myc. Fr. XXXIII (1917) p. 95, tab. 7. - Gregaria vel subsparsa, sessilis, carnosa, ex hemisphaerico applanata, 1-4 mm. lata, extus pilis erectis brunneis vestita; hymenio albido vel pallido,

margine ciliato; ascis cylindraceo-clavatis, ad basim attenuatis, operculatis, octosporis,  $200\text{-}280 \times 15\text{-}20$ , jodo non tinctis; paraphysibus gracilibus, septatis, hyalinis, ad basim ramosis ad apicem haud incrassatis, 2-3  $\mu$  cr.; sporidiis monostichis, ovato-ellipsoideis, hyalinis, levibus, intus minute granulosis,  $18\text{-}21 \times 12\text{-}13$ . — Pili marginales simplices, brunnei, rigiduli, apice acuti vel obtusi, parce septati vel continui,  $200\text{-}900 \times 13\text{-}18$ , pili inferi breviores saepeque basi bulbosi, ad  $17\text{-}35~\mu$  cr. Quidam alii intermixti longissimi, flexuosi, pallidi aut pallide fusci, pluriseptati, hyphaeformes,  $2\text{-}3~\mu$  crassi, praesertim ad basim receptaculi interdum perspiciuntur.

Hab. ad terram uliginosam in umbrosis, prope Savigné (Vienne). Gallia. — Nomen virisimiliter mutandum quia jam extat Lachn. Boudieri. — Habitu, T. Woolhopeiam simulat sed notis micrologicis, praesertim sporis, omnino distincta. T. bulbo-crinitae disco pallidiore, pilis et loco diversa.

8. Lachnea Longii (Seaver) Saccardo, Sepultaria Longii Seaver, Myco- γω logia, 7., 1915 p. 199 t. 161. — Ascomatibus gregariis v. caespitosis, initio clausis et semi-sepultis, dein circulari v. irregulariapertis, 4 cm. diam., orbicularibus v. e mutua pressione angulosis, contortis v. compressis, extus pallide brunneis, longe pilosis; pilis flexuosis, septatis, brunneis, aequalibus, disco concavo-applanato, colore non indicato; ascis subcylindricis deorsum stipitiformi-tenuatis, 250-300 × 20-22, paraphysibus clavulatis, 4 6 μ cr., guttulatis, hyalinis; sporidiis monostichis, ex ellipsoideo subglobosis, crasse 1-guttatis, 20-22 × 18-20.

Hab. ad terram nudam, Albuquerque, New Mexico, Amer. bor.—Ad gen. Sphaerosporam nutat.

9. Lachnea aurantia (Rodw.) Sacc., Sepultaria aurantia Rodway, Pap. 715
a. Proc. R. Soc. Tasmania f. Year 1920 (1921), p. 154. — Habitus
Sepultariae austro-geasteris sed minor. Margine fimbriato, disco e latericio flavo-aurantiaco ochraceo; sporis ellipsoideis utrinque subacutis, hyalinis levibus, 22 × 8; paraphysibus filiformibus septatis hyalinis.

Hab. ad terram Sandy hill, Bellerive, Tasmania.

10. Lachnea austro-geaster (Rodw.) Sacc., Sepultaria austro-geaster Rod-7152 way, Pap. and Proc. R. Soc. Tasmania f. Year 1920 (1921), p. 154.— Oblonga primum hypogea et clausa 1 cm. circ. diam., matura ad superficiem emergens et lobulata aperta geasteroidea; carnosa pallide brunnea intus parum obscuriore extus hyphis numerosis terram sabulosam permeantibus tecta; ascis linearibus octosporis; spori-

diis late ellipsoideis obtusis hyalinis levibus, 24 \* 10; paraphysibus clavatis apice incrassatis, septatis, loculis quandoque inflatulis moniliformibus.

Hab, ad terram, Sandy hill, Bellerive, Tasmania.

11. Lachnea hemisphaerica Wigg.— Syll. VIII p. 166— var. pusilla Peck 7153 in N. Y. State Mus. Bull. 157 (1911) p. 40 (1912). — A typo tantum differt ascomatibus minoribus, 1,5-4 mm. latis et sporidiis uninucleatis.

Hab. ad terram udam exsiccatam, Remsen, Amer. bor.

12. Lachnea Echinus (v. Höhn.) Saccardo, Stereolachnea \*) Echinus v. 7154 Höhn., Ann. Mycol. 15., 1917, p. 353. — Ascomatibus sessilibus, 2.4 mm. lat., extus atro-brunneis, disco albo, initio globoso clausis, dein scutellatis, margine inflexo, basi hyphis brunneis septatis 10-12  $\mu$  cr., sursum marginem usque setis crasse tunicatis, plerumque continuis acutis atro-brunneis, sursum parallele dispositis, 210-280  $\times$  30-40 (basi), parte intra excipulum immersa 160  $\times$  15-20, simplici v. ramosa; hypothecio 200  $\mu$  cr., e cellulis 8-10  $\mu$  diam. constanti; ascis cylindrineis, octosporis, jodo immutatis, 180-240  $\times$  14-16, paraphysibus crebre septatis, 3  $\mu$  cr., sursum usque ad 5-9  $\mu$  dilatatis; sporidiis ellipsoideis, hyalinis, monostichis, asperulis, 1-2-guttatis.

Hab. in cortice putrescenti, Sonntagsberg in Austria infer. (P. P. STRASSER). — Habitus fere L. lividae v. L. gregariae.

SCLEROTINIA Fuck. -- Syll. VIII p. 195, X p. 6, XI p. 401, XIV p. 761, XVI p. 721, XVIII p. 40, XXII p. 636.

1. Sclerotinia Panacis W. H. Rankin, Phytopathology, II (1912) p. 30, 7155 c. ic.— Apotheciis gregariis vel solitariis, nonnunquam caespitosis; sclerotiis irregulariter depresso-globosis, 0,3-1 cm. diam., solitariis vel aggregatis, nigris; ascomatibus carnoso-subcoriaceis, initio clausis, globosis, dein expanso-applanatis, rotatis, in vel prope centrum depressis, unde sinus in hymenio radiatim extendunt, plerumque contortis vel irregulariter lobulatis, 1,5-2,5 cm. diam., rubro-brunneis; stipite levi, tortuoso, variae longitudinis, 2-3 mm. cr., obconico; ascis anguste cylindraceis, apice rotundatis, octosporis, 125-

<sup>\*)</sup> Stereolachnea v. Höhn. l. c., Characteres Lachneae, sed setulae non ex superficie ascomatis, sed ex ejus contextus interiori nascentes, non tantum ad marginem sed etiam in basi (cfr. etiam v. Höhn. in Ber. deutsch. bot. Ges. 35., 1917, p. 250).

138 × 6,5; paraphysibus sparsis, apice paullo incrassatis; sporidis oblique monostichis, ellipsoideis, biguttulatis, hyalinis, 11,5-16 × 5-7,5. Conidia (in culturis) globosa, 3-5,5 μ diam. in conidiophoris verticillatis. Mycelium Rhizoctoniae simile, initio hyalinum dein nigrum.

Hab. in rhizomatibus Panacis quinquefolii (Araliaceae), in terra immersis, prope Apulia N. Y., America bor.

2. Sclerotinia minor I. C. Jagger, Journ. Agric. Research, 20., 1920, 1150 p. 331, cum icon. et tab. 59 p. p.— Ascomatibus solitariis raro congregatis ex singulo sclerotio; disco 0,5-2 mm. diam.; pedicello cylindraceo angusto, flexuoso, utrinque attenuato 5:12 mm. longo; ascis e cylindraceis cylindraceo-clavatis, 125-175 × 8-11, plerumque circ. 141 × 8,9, octosporis; sporidiis ex ellipsoideis ovoideis, hyalinis, 8,3-19,9 × 5-8,8, plerumque circ. 14,1 × 7; paraphysibus e filiformibus cylindraceo clavatis, septatis raro ramosis ascos subaquantibus, 3-4 μ cr.; microconidiis globosis hyalinis 3-4,2 μ diam. e conidiophoris breviter obclavatis orientibus; appressoriis copiosis; sclerotiis nigris, irregularibus 0,5-2 mm. diam. quandoque irregulariter congregatis.

Hab. parasitica in Lactuca sativa (Compositae) et Apio graveolente (Umbelliferae) etc., Massachusetts, New York, Pennsylvania, Florida, Amer. bor.

3. Sclerotinia Matthiolae R. Lendn., Bull. Soc. bot. Genève 1917, p. 21 m fig. 1-3 et p. 421 430 fig. 1-4.— Mycelio candido, hyphis anastomosantibus, septatis, 4-6  $\mu$  cr. (max. 8  $\mu$ ); sclerotiis magnis irregulariter depresso-globosis, solitariis, nigris, 0,3-0;8 cm. lat.; conidiis globosis, levibus 4-5  $\mu$  cr. hyalinis, in conidiophoris irregulariter ramosis sitis; ramulis brevibus plerumque monosporis; ascomatibus non numerosis v. solitariis, stipitatis, pallide brunneis 3-4 mm. diam., stipite duplo longiore, basi extenuato, flexuoso, tarsum in cupulam sensim dilatato; ascis cylindraceis, apice rotundatis, 140  $\times$  10, octosporis; sporidiis ellipsoideis utrinque plus minus tenuatis, 14  $\times$  7; paraphysibus sparsis, 130  $\times$  3.

Hab. in caulibus Matthiolae valle siacae (Cruciferae), cultae, Genevae, Helvetiae. — Sclerotiniae Libertianae et Scl. Panacis affinis.

4. Sclerotinia Ricini G. H. Godfrey, Phytopathology, 9., 1919, p. 565, 758 tab. XL-XLI.—Ascomatibus ex quoque sclerotio solitariis vel pluribus, 5-30 mm. altis, plerumque 6-15 mm., infundibuliformibus vel cyathiformibus vel disciformibus, longe stipitatis, cinnamomeis vel

castaneis; stipite concolori, cylindraceo, tenni glabro, fiexuoso, deorsum attenuato, basi arrhizo; cupulis primum clausis dein patelliformibus, margine interdum recurvato, extus rugulosis, 1-7 mm. diam, plerumque 1,5-4 mm.; ascis cylindraceis vel cylindraceo-clavatis, apice leniter incrassatis, poro aperientibus, 50-100 × 6-10. plerumque 80-100 × 8; sporidiis 8, ellipsoideis, saepe subfusoideis, hyalinis, continuis, biguttulatis, 9-12 × 4-5; paraphysibus numerosis, filiformibus, septatis, hyalinis, 1,5-2 µ diam.; statu conidico (Botrytis sp.) molem late effusam arachnoideam formante, avellaneogriseo vel avellaneo, in speciminibus siccis atro olivaceo griseo; hyphis sterilibus procumbentibus, hyalinis, multiseptatis, saepe vacuolatis, frequenter anastomosantibus; hyphis fertilibus longis, tenuibus, glabris, dichotome ramosis, basi leniter constrictis, in maturitate olivaceis; conidiis in sterigmatibus, globosis, glabris, hyalinis, 6-12 μ, plerumque 7-10 μ, circa apices non-inflatos dense congregatis; appressoriis basi 20-60 µ crassis; microconidiis globosis, hyalinis, 2-3,5 µ, apice in conidiophoris orientibus; conidiophoris brevibus, obelavatis, solitariis vel gregariis, in lateralibus hypharum vel apice in ramis specialibus; sclerotiis nigris, asperis, elongatis, irregularibus, 1-25 mm. longis, plerumque 3-9 mm, suberumpentibus vel superficialibus, in inflorescentiarum vetustarum axibus et in caulibus.

Hab. parasitica plerumque in inflorescentiis, etiam in caulibus et foliis Ricini communis (Euphorbiaceae), Florida, Mississipi, Louisiana, Texas et Cuba, Amer. bor.

Sclerotinia nervisequia Schr. — Syll. XI p. 401 — var. bambusacea 7159
 Rehm, Ascom. Philipp. VII, in Leafit. of Philippin. Bot. VIII, 1916,
 p. 2930. — A typo differt ascis sporisque paullulum minoribus.

Hab. ad emortuam Bambusam vulgarem (Graminaceae), Los Baños, Ins. Philippin. (S. A. REYES) nee non ad folia putrida Dimerocalycis longipedis, Mt. Maquiling, Ins. Philippin. (S. A. REYES).

6. Sclerotinia borealis Bub. et Vleug. in Vleugel, Svensk Bot. Tidskr. 7160 11., 1917, p. 308. – Sclerotiis in vaginis evolutis, 5-8 mm. longis, 2-4 μ latis, oblongis, saepe curvatis vel lobatis, primo sordidis de inde nigris. Ascomatibus 1-3 e quoque sclerotio evolutis, cyathoideis, usque 6 mm. latis, disco laete brunneo, infra dilutioribus margine intacto, extus contextu pseudoparenchymatico, dilute brunneo, infra dilutioribus, margine intacto, extus contextu pseudoparenchymatico subhyalino, stipite usque 25 mm. longo tenui, basim

versus attenuato, dilute brunneo, subvelutino. Ascis cylindraceis, 190-210 × 9-13, rectis, apice incrassatis, obtusis, ibidemque poro ope jodi pulchre cyanescente instructis, basim versus attenuatis, hyalinis, brevissime pedicellatis, octosporis, paraphysibus filiformibus, ascis acquilongis, apice subclavatis, circa 2.5 µ crassis obvallatis. Sporidiis recte monostichis, ellipsoideis vel oblongo-ellipsoideis, 19-28 × 7-11, plerumque inacquilateralibus utrinque attenuatis et rotundatis, hyalinis, continuis.

Hab. in vaginis Dactylidis glomeratae cult. (Graminaceae), Lulea provinciae Vesterbotten, Succiae (J. VLEUGEL).

7. Sclerotinia muscorum A. L. Smith et J. Ramsbottom, Trans. Brit. 766 Myc. Soc. IV, pt. I, 1912, p. 168 (1913).— Sclerotiis oblongis, teretibus inter musci cujusdam folia abscondifis, extus nigris, intus roseo-albis, circa 2,5 mm. longis, 0,5 mm. crassis; ascomatibus solitariis longe stipitatis, tenerrimis; stipite filiformi, tereti, flexuoso 5 mm. longo, 0,25 mm. crasso, rufo-succineo, e cellulis elongatis, 50-55 × 5-10 composito; ascomate proprio minimo, primum coniformi clauso, verruculoso, roseolo, dein expanso, denique patelliformi, 1 mm. circ. lato, margine incurvato; ascis cylindraceis, breviter stipitatis, octosporis, 100 × 10, paraphysibus filiformibus vel leniter clavatis, 3 μ cr. obvallatis; sporidiis irregulariter monostichis, simplicibus, hyalinis, 10-15 × 3-4.

Hab. ad folia Campylopi atrovirentis (Musci), prope Belfast, Britannia (H. C. I. GWYNNE-VAUGHAN).

8. Sclerotinia Pirolae Grosse, Ann. Mycol. X, 1912, p. 388. — Bucholtz 7166 et Grosse, Die Entwickl. d. parasit. pilz. Scler. Pirolae, Bull. Soc. Imp. Natur. Moscou 1916, pp. 173-186, 2 tav. — Sclerotiis in capsulis 2-5 aggregatis; sclerotiis inaequalibus ovalibus, 2,5-4 mm. long. 1,5-2,5 mm. latis, versus axem capsulae sulcatis, extus nigris, intus albis; ascomatibus longe stipitatis, 1-4 e sclerotio orientibus; stipellis 1,5-3 cm. longis, 1,5 mm. crassis, versus basim fuscis, apice clarioribus; hymenio plano, levi marginato, 3-7 mm. diam.; ascis cylindricis, 130-145 × 8-10, J ope non coerulescentibus; sporis uniseriatis, ellipsoideis, 8-11 × 5-6; paraphysibus 2 μ latis, filiformibus, septatis, raris.

Hab. in capsulis Pirolae rotundifolia, minoris, ehloranthae, uniflorae, mediae (Pirolaceae), in Rossiae provinciis Curonia, Livonia, Osilia, Vitebsk, frequens.

9. Sclerotinia Fagopyri S. Hori, Journ. Plant Protection, 3<sup>3</sup>. 171-175, 7163 an. 1916; Mycologia IX, 1917, p. 172.— Sclerotiis orbicularibus,

ellipsoideis, oblongis v. ovoideis,  $2-3 \times 2-4$  mm., superficie nigra, intus roseis; apoteciis singulis v. binis, cinnamomeo-brunneis, 3 mm. diam., subcupulatis, stipitatis, stipite 3-5 mm. longo; aseis cylindraceis, curvulis, 135-155 

9-11; octosporis; sporis oblique monostichis, 11-14 × 6-8, apice utrinque guttulatis; paraphysibus filiformibus v. clavatis, ascos leniter superantibus, 2-2,5 µ diam., 2-4 (plerumque 2-3) septatis.

Hab. sclerotia ex seminibus Fagopyri esculenti (Polygonaceae), Japonia.

10. Sclerotinia Mali Takahashi, Bot. Mag. Tokyo 29 (1915) p. (217).— 7164 Conidiophoris laxe fasciculatis, plus minusve coalescentibus, secus foliorum nervum medianum nec non petiolos et pedunculos efflorescentiam albidam vel griseam efformantibus, septatis, simplicibus, hyalinis, 40-100 × 10-16; macroconidiis (Monilia) plerumque breviter ellipsoideo-limoniformibus, obtuse papillatis, hyalinis, 10,5-16,5 × 7,5-12, disjunctoribus usque ad 2 μ longis; microconidiis globosis, hyalinis, 1,5-3 μ diam.; ascomatibus e sclerotiis in fructibus juvenilibus mumificatis orientibus, 1-8 (plerumque 4) in quoque fructo, plerumque infundibuliformibus v. campanulatis, centro parce depressis, brunneis, disco pallidiore, 5-6 mm. diam., stipite atrobrunneo 5-10 mm. (interdum usque ad 25 mm.) longo; ascis cylindraceis, apice obtuse rotundatis, basi tenuatis, 130-187 × 7,5-10,5; sporidiis late ellipsoideis vel ovatis, utrinque rotundatis, hyalinis, 75-14,5 × 4,5-7,5; paraphysibus filiformibus, 2-4-septatis, simplicibus vel dichotomo-ramosis, apice leviter inflatulis, 64-150 > 3.

Hab. in foliis, petiolis pedunculisque nec non in fructibus et ramulis junioribus Piri Mali (Rosaceae), in Japonia. - Affinis Scl. Kusanoi sed biologice distincta.

CIBORIA Fuck. Syll. VIII p. 201, XI p. 402, XIV p. 762, XVI p. 723, XVIII p. 45, XXII p. 645.

1. Ciboria lilacina Boud. et Torr., Bull. Soc. Mycol. Fr. 1911, p. 132, 7165 t. VI f. II. - Minuta, 2-3 mm. lata, stipitata, tota amoene lilaceovinosa. Receptacula primo regularia, dein expansa, margine laevi reflexo, extus concoloria et pruinosa, stipite sat brevi sed bene conspicuo suffulta. Paraphyses graciles, ad apicem non aut vix incrassatae, non guttulosae. Thecae inoperculatae, octosporae, minores, circiter 100 u longae, 10 crassae, ad basim paululum attenuatae. Sporae oblongo-fusiformes hyalinae intus non guttulosae nec septatae, laeves, 13-18 µ longae, 4-4,5 µ crassae. Caro interna pallida,

exterior cum hymenio lilaceo-vinosa.

Hab. Lisbonne, ad petioloso putridos Palmarum (Rev. Torrend).

2. Ciboria elatina (A. et S.) Sacc., Syll. VIII p. 318 (Chlorosplenium), 7166
Rutstroemia elatina (A. et S.) Rehm. — var. acicola v. Höhn. in
Stzgsb. Akad. Wiss. Wien CXXIII, 1, p. 112 (1914).— A typo differt quia acicola, non ramicola, et minor, longius et tenuius stipitata.

Hab. in acubus Pini, Sonntagsberg, Austria infer. (STRASSER).

BELOSPORA F. E. Clements, Genera of Fungi 1909, p. 87, 175. — 787 Est Belonioscypha chaetospora.— Typus Ciboria ciliatospora Fuck., Syll. VIII p. 205 (Podobelonium Sacc., p. p.).

HELOTIUM Fr.— Syll. VIII, p. 210, X p. 6, XI p. 402, XIV p. 762, XVI p. 726, XVIII p. 47, XXII p. 647.

Helotium tasmanicum Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7188
 Year 1920 (1921), p. 155.— Sessile, e concavo convexo, 2-4 mm. diam., undique flavo-aurantiaco sed extus parum pallidiore et leniter furfuraceo; ascis cylindraceis; sporis augustis oblongis 14-18 

3-4,5, hyalinis, levibus, disco concolori.

Hab. ad ligna dejecta, Tasmania.— Proximum Hel. citrino a quo differt disco concolore nec obscuriori.

2. Helotium carnosum Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7189 1920 (1921), p. 155. — Sessile vel brevissime stipitatum, udo pallide flavo-ochraceo, molli, carnoso, arescendo e obscuriore pallide rubescenti, 1 mm. diam.; margine crasso involuto, convexo, extus delicate pruinoso; ascis cylindraceis; sporis hyalinis levibus, anguste oblongis, 6 × 1,5.

Hab. ad ligna dejecta, Tasmania.

3. Helotium microsporium Rodway, Pap. a. Proc. R. Soc. Tasmania f. 710 Year 1920 (1921), p. 155. — Discoideum breviter stipitatum 1-2 mm. diam. lividum v. albescens, molli carnosum extus leve; ascis cylindraceis; sporis hyalinis, levibus oblongis obtusis, 4,5 \* 2.

Hab. ad ligna dejecta, Tasmania. — H. prasino proximum sed pallidiore. Mollisiae subsimile.

4. Helotium striatum Rodway, Pap. a Proc. R. Soc. Tasmania f. Year 7171 1920 (1921), p. 155. — Sessile v. brevissime angusteque pedicellato; disco carnoso, molli, concavo, udo pallide cinereo arescendo ochraceo, 1-2 mm. diam., extus brunneo-fuligineo, levi striato; ascis

clavatis, paraphysibus filiformibus obvallatis; sporis oblongis obtusis, hyalinis,  $6 \times 3$ .

Hab. ad ligna dejecta, Tasmania.

5. Helotium pusense Syd., in Syd. et Butl., Ann. Mycol. IX, 1911, p. 7172 374. — Ascomatibus sparsis v. gregariis, mox cupulatis, 1-1,5 mm. diam., in alcohole albidis v. albido-ochraceis, in vegeto verisimiliter flavis, glabris, levibus, extus lenissime pruinulosis marginatis, breviter crasseque stipitatis, stipite <sup>3</sup>/<sub>4</sub>-1 mm. longo; ascis cylindraceis, 125-180 × 10-14, octosporis; sporidiis ellipsoideis, utrinque obtusis, continuis, hyalinis, 16-20 × 7-9, oblique monostichis; paraphysibus, 2 μ crassis.

Hab. in caulibus Ricini communis, Pusa, India (INAYAT).
6. Helotium virgultorum (Vahl) Karsten, Syll. VIII p. 266 (Phialea).— 7173 rufescens Sacc., Notae Mycol. XXI p. 38 (N. G. bot. it. 1917).— Ascomatibus dilute rubellis, stipite albido; ascis 95-100 × 11-12; sporidiis tereti-fusoideis, leniter curvis, guttulatis, 20-25 × 4-5, initio utrinque brevissime subapiculatis.

Hab. in ramis emortuis Alni viridis, La Thuile, Ital. bor.
7. Helotium uralense Naoumoff, Champ. Oural. I (1915) p. 27 t. If. 16.— 7174.
Ascomatibus carnosulis, gregariis, stipitatis, subcupulatis, dein disciformibus, submarginatis, pallide flavidis, 2-4 mm. diam.; stipite, 1,5-2, circ. 0,5 mm. cr., concolore, disco aurantio-flavido; ascis octosporis, teretiusculis, apice rotundatis, 55-70 × 6-8, paraphysatis; Jodo immutatis; sporidiis late fusoideis v. ellipsoideis, oblique monostichis, 5,5-6,5 × 3,5, hyalinis; paraphysibus filiformibus 1,5 μ cr., hyalinis.

Hab. in cortice A bietis sibiricae, Perm, Ural, Rossia.
8. Helotium Suzannae Boud., Bull. Soc. Myc. Fr. XXXIII (1917) p. 18, 7175 tab. V fig. V. — Minutum aut pro genere medium, 1-2 mm. latum totidemque altum; ascomate stipitato, pallide ochraceo hymenio pallidiore, extus minutissime et tenuiter fibrilloso, stipite ad basim fuscescente; ascis crasse clavatis, 130-140 × 10-15; paraphysibus subsimplicibus, rectis, albis, intus granulosis, 3-4 μ crassis; sporidiis fusoideis, rectis vel vix curvatis, albis, levibus, intus 3-4-, rarius 5-guttulatis granulisque minutis repletis, raro maturitate guttulis in una confluentibus et granulis deficientibus, 28-30 × 7-8.

Hab. ad ramulos putridos prope La Fertè s. Jouare, Gallia (SUZANNE DECARY).— H. salicello valde affine sed colore alieno.

9. Helotium rhizomaticola Boud., Bull. Soc. Myc. Fr. XXXIII (1917) 7176 p. 19, tab. VI fig. IV. — Medium vel pro genere majus, 3-5 mm.

latum, ochraceum, subtus pallidius, crasse et breviter stipitatum, tenuiter marginatum; ascis octosporis, cylindraceo-clavatis, 140-160  $\approx$  8-10; paraphysibus simplicibus, rectis, validis, septatis, ad apicem minute granulosis; sporidiis majoribus, albis, fusiformibus, intus granulis minutis hyalinis, ad extremitates repletis, centro libero, saepe tenuiter curvatis, 30-36  $\approx$  4-6.

Hab. ad rhizomata Caricis cujusdam putrida, Verdun, Gallia. (JOUFFRET).

- PHIALEA (Fr.) Gill. Syll. VIII p. 251, X p. 9, XI p. 403, XIV p. 765, XVI p. 727, XVIII p. 54, XXII p. 654.
- 1. Phialea aurantiaca Sydow, Engler' Botan. Jahrbüch. 54., 1916, p. 7177 257. Ascomatibus sparsis <sup>3</sup>/<sub>4</sub>·1 <sup>1</sup>/<sub>4</sub> mm. altis, intense aurantiacis, glabris, levibus, in sicco haud corrugatis, subceraceis, stipite 0,5-t mm. longo, cylindraceo, subconcolore, ad basim nigrescente; disco patellari, crassiusculo, 200-900 μ diam., crasse marginato, contextu prosenchymatico; ascis cylindraceis, obtusis, sessilibus, 90-120 × 9-11, octosporis, J +; sporidiis distichis, fusiformibus, continuis, utrinque leniter attenuatis, hyalinis, 17-22 × 3-3,5; paraphysibus filiformibus, 2 μ crassis, ad apicem haud incrassatis.

Hab. ad ramos tenues emortuos, « Felsspitze » Novo Guinea nordor. Africae (LEDERMANN).

2. Phialea Symphoricarpi (A. L. Smith) Saccardo, Hymenoseypha Sym- nn phoricarpi A. L. Smith in Trans. Brit. Myc. Soc. IV, pt. I, 1912, p. 75 (1913). — Ascomatibus sparsis, stipitatis, cupulatis dein expansis, planis, glabris vel minute tomentosis in stipite subbulboso, margine integro, undique luteo-nitentibus, 300-500 μ latis, stipite 300-1000 μ alto; ascis cylindraceis, basi attenuatis, 60 × 7, paraphysibus filiformibus tenuibus obvallatis; sporidiis oblongis vel oblongo-fusoideis, obtusiusculis, utrinque guttulatis.

Hab. in ramis dejectis Symphoricarpi racemosi, Binscarth, Anglia. — Phialeam vitellinam (Rehm) Sacc. in mentem revocat sed sporidis et stipite tomentoso subbulboso differt.

3. Phialea phaeoconia C. E. Fairman, Ann. Mycol. IX, 1911, p. 151, 7179 fig. 6-7. — Cupulis gregariis, hypophyllis, atris, margine brunneo v. griseo et crenato instructis, globosis, subclausis, stipite brunneo, aequali v. sursum incrassato, 240-250 μ diam. 500 μ alt., disco brunneo; ascis sessilibus v. breve stipitatis, cylindraceo clavatis, apice rotundatis, 50 × 10, ? octosporis; paraphysibus filiformibus; sporidiis cylindraceis v. fusoideis, rectis curvulisve, monostichis

v. distichis, continuis, hyalinis, 10-13 \* 3-4.

Hab. in foliis emortuis Antennariae plantaginifoliae, Lyndonville N. Y., Amer. bor.

4. Phialea cyathoidea (Bull.) Rehm. — Syll. VIII p. 251 — f. Lappae 7180 Rehm, Ascomyc. exsicc. fasc. 52 n. 704 b, Ann. Mycolog. XI, 1913, p. 171. — Hab. in caulibus siccis Lappae, Neufriedenheim, Bavaria (Rehm). — fm. ciliatula Rehm, Ascomyc. Philipp. I, in Philipp. Journ. of Sci. VIII (1913) p. 192. — Hyphis marginalibus excipuli distantibus, filiformibus, rectis, obtusis, subfuscidulis, scabris, usque ad 30 × 3; sporidiis fusiformibus utrinque acutatis, 12-15 × 1,5-2.

Hab. in petiolis emortuis Cyatheae, Luzon, prov. Laguna, Mt. Maquiling, ins. Philipp. (C. F. Baker).

5. Phialea Mariae Boud., Bull. Soc. Myc. Fr. XXXIII (1917) p. 18, 7181 tab. VI fig. III. — Media, stipitata, 2-5 mm. lata et totidem alta, olivacea, extus saturatior; ascomate levi, cupulato dein applanato, margine tenuiter denticulato et stipite nigricantibus, hymenio olivaceo; ascis cylindraceo-clavatis, octosporis, foramine marginato, 150-160 = 10-15; paraphysibus rectis, simplicibus vel divisis, ad apices paululum incrassatis; sporidiis oblongo fusoideis, levibus, primo intus subgranulosis, dein hyalinis posteaque medio septatis, 20-25 = 7-8.

Hab. ad cortices A bietis, Rhône, Gallia (MARIA RENARD).— Ciboriae strobilinae affinis sed notis plurimis distincta.

6. Phialea anomala Peck, N. Y. State Mus. Bull. 167, 1912, p. 29 7182 (1913). — Ascomate tenui, late cupulato vel disciformi, 1,5-3 mm. lato, fibris parvis fulvis radiantibus externe vestito, margine incurvo integro; stipite gracili, fulvo, fibrilloso-tomentoso, firmo, flexuoso, 0,5-1,5 cm. longo; hymenio viridi-atro; ascis cylindraceis vel subclavatis, octosporis, filiformi-paraphysatis; sporidiis ellipsoideis vel basi leniter attenuatis, continuis, hyalinis, 10-12 × 4-5.

Hab. in caulibus et ramis herbaceis dejectis, udis, Remsen, Oneida Co., Amer. bor.— Anomala ob ascoma et stipitem fibrillosos.

7. Phialea Panici v. Höhn., Fragm. z. Mykol. 782, in Stzgsb. Akad. 7183 Wiss. Wien CXXI, 1, p. 405 (1912).— Ascomatibus superficialibus, subsessilibus, gregariis, siccis unicoloribus, luteo-brunneolis, parallelo-contextis, 260 μ altis, stipite 160 μ longo 60 μ crasso, disco 180-200 μ diam., cupulato, extus levi; ascis clavatis, pedicellatis, 50-60 ε 6, octosporis, paraphysibus filiformibus 1 μ cr. ascos non superantibus obvallatis; sporidiis distichis, oblongo-fusoideis, de-

mum distincte bilocularibus, utrinque acutiusculis, hyalinis, 10-11 × 1,7-1,8. Jodi ope asci tenuiter caerulescunt.

Hab. in foliis siccis Panici sp., Tjibodas, ins. Java. — Ob sporidia minuta et demum didyma a caeteris speciebus graminicolis differt.

8. Phialea rufidula Bresad., Ann. Mycol. IX, 1911, p. 274.— Ascomatibus gregariis, stipitatis, cyathiformibus, ceraceo-membranaceis, pallide rufidulis, puberulis, 0,5-1 mm. latis; hymenio rufo-brunneo; contextu subhymeniali prosenchymatico, excipuli parenchymatico, ex cellulis 8-10 μ diam.; superficie excipuli ex cellulis clavatis, circiter 15 × 4; stipite deorsum fuscescente, filiformi, glabro 1-1,5 mm. longo, contextu prosenchymatico (hyphoso); ascis subfusoideis, 50-60 × 5-6, jodo —; paraphysibus 2 μ cr., apice sensim subincrassato, 3 μ; sporis fusoideis, hyalinis, 6-8 × 3-3,5.

Hab. ad involucra fructus indet., Kisantu, Congo (VANDERYST).

**PEZIZELLA** Fuck. — Syll. VIII p. 275, X p. 10, XI p. 405, XIV p. 768, XVI p. 729, XVIII p. 57, XXII p. 658.

1. Pezizella inconspicua Rehm in Strasser, Sechst. Nachtr. Pilzfl. Sonn-7185 tagsb. in Verh. zool. bot. Ges. Wien LXV, 1915, p. 165. — Apotheciis dispersis, sessilibus, primitus globoso clausis dein explanatis, disco orbiculari angusto marginatis, hyalinis ad basim fuscidulis, 0,2 mm. latis, pseudoparenchymatice contextis, siccis convolutis, punctum albidulum formantibus; ascis clavatis, rotundatis sessilibus, 40 × 6, octosporis; sporidiis oblongis rectis, 1-locularibus, guttulis oleosis magnis expletis, hyalinis, 8 × 3; paraphysibus filiformibus hyalinis.

Hab. ad truncos fagineos putridos, Sonntagberg, Austria Inf. (P. STRASSER).

2. Pezizella Puiggarii Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 7186 Cienc. Cordoba, t. 23., 1919, Extr. p. 148.— Ascomata hypophylla parva turbinato-hemisphaerica 100-250 × 50-100, sessilia lutescente-carnea ceracea extus subpulverulenta, disco planiusculo v. convesculo pallidiore, apothecio tenui membranaceo prosenchymatico; asci subfusoidei, modice et subgraciliter pedicellati, aparaphysati, octospori, 65-70 × 7-8; sporae elongato-ellipticae utrinque acutiusculae, hyalinae, continuae, 10-12 × 3-4.

Hab. in foliis Mirtaceae cujusdam et verisimiliter parasitica Phyllachorae in iisdem foliis, prope Apiahy, Brasilia (J. Puiggari).

3. Pezizella Vogelii Syd., Ann. Mycol. 14., 1916, p. 246, Myc. Germ. 7187

u. 1349. — Apotheciis gregariis, lata basi sessilibus, primitus globoso-clausis, dein discum rotundatum tenuiter marginatum nudantibus, 0,3-1 mm. diam., ceraceis, in sicco luteis vel albido-luteis, contextu prosenchymatico hyalino; ascis cylindraceis vel cylindraceo-clavatis, superne rotundatis, 45.55 × 8-9, octosporis, filiformiter paraphysatis; sporis oblique monostichis vel distichis, continuis, fusoideis, rectis, 9-13 \* 2,5-3,5.

Hab. in petiolis emortuis Robiniae Pseudacaciae. Tamsel Germaniae (P. Vogel). -- Affinis Pez. alboniveae.

4. Pezizella epimyces Syd., Ann. Mycol. 14., 1916, p.367. — Ascoma- 7188 tibus solitariis vel 2-3 associatis, sessilibus, basi leniter angustatis, 75.150 \( \mu\) diam., non vel vix marginatis, gelatinoso-carnosulis, disco rufo-succineo convexo, in sicco fere cupuliformiter contractis, extus ubique copiosissime nivee puberulis, excipulo fere nullo, contextu rafo-fusco vel obscure succineo prosenchymatico; ascis clavatis, 35-40 \* 9-10, octosporis, stipite brevi; paraphysibus tennissimis, hyalinis, ascos superantibus, apice recurvatis vel hamatis, ca. 1 µ crassis, sporidiis 1-2 stichis, ovatis, continuis, hyalinis,  $7.9 \times 3.3,5$ .

Hab. parasitica in peritheciis Parodiellae (Epiphymatis) Mucunae ad folia Puerariae, M. Maquiling insul. Philipp. (L. F. BAKER).

5. Pezizella roseo-flavida Rehm, Ascom. exsicc. fasc. 52 n. 2029, et 7189 Ann. Mycol. XI, 1913, p. 167. - Ascomatibus gregariis, sessilibus, primitus globoso-clausis, dein patellaribus, tenuissime marginatis extus glabris, roseo-albis, 0,3-1,2 mm. lat., siccis vario modo complicatis, flavide roseolis, excipulo membranaceo ad basim parenchymatice, versus marginem pseudoparenchymatice contexto, hyphis marginalibus obtusis -30 μ long., -5 lat.; ascis clavatis, apice rotundatis, 30 × 5-6, octosporis, J +. Sporis oblongis v. subclavatis, unilocularibus, hyalinis, 5-8 × 2, distichis; paraphysibus filiformibus, hyalinis, ad apicem 2 µ lat.

Hab. in ligno Tiliae putrido, Burgkundstadt, Franconia sup. (ADE). - Pez. tyrolensi Rehm affinis.

6. Pezizella Tormentillae Rehm, Ascom. exsice. fasc. 53, n. 2057; Ann. 7190. Mycol. XI, 1913, p. 392.— Apothecia in pagina foliorum inferiore decolorata sessilia, dispersa vel congregata, -0,2 mm. lata, albidoflavidula, disco orbiculari, plano, tenuissime marginato, excipulo membranaceo ex cellulis prosenchymatice elongatis, ad marginem non prominentibus contexto, glabro, cinereo-fuscidulo, demum nigrescentia. Asci clavati, apice subacutati, -50 × 10, 8-spori. J +.

Sporae oblongae, utrinque obtusae, rectae, 1-cellulares, 2-guttatae, hyalinae,  $10 \times 4$ -5, distichae. Paraphyses filiformes, septatae, 1,5  $\mu$ , versus apicem 3  $\mu$  cr., hyalinae, ad apicem dilute flavidule conglobatae.

Hab. ad folia putrescentia Potentillae Tormentillae, Sonntagberg, Austria inf. (P. STRASSER).— A Mollisia Dehnii, Trochila Potentiliae, Sacc. VIII p. 712, omnino diversa.

7. Pezizella lanceolato-paraphysata Rehm, Ann. Mycol. IX, 1911, p. 7891 367.— Apotheciis gregariis, interdum confluentibus, sessilibus, primitus globoso-clausis, dein disco patellari, tenuiter marginato, plano, orbiculari, albido, 0,3-1 mm. diam., extus glabris, versus basim coarctatis, siccis complicatis, albidis v. albido-flavidulis, excipulo ad basim e cellulis minutis parenchymatice, ceterum psendoparenchymatice hyaline contexto; ascis clavatis, 30-35 × 5-7, ad apicem obtusis, J ope +, octosporis; sporis clavatis, apice superiore obtusis, inferiore acutatis, unicellularibus, rectis, hyalinis, 6-8 × 2, distichis; paraphysibus filiformibus versus apicem acutatis et plus minusve prominentibus.

Hab. ad caules siccos Spiraeae Filipendulae, Lyndonville N. Y., America bor. (FAIRMAN). — Paraphysibus lanceolatis insignis ad Helolachnum Torr. (

Lachnum pilis carens) sed paraphysibus lanceolatis praeditum vergit.

8. Pezizella ombrophilacea Rehm, Ascom. Philippin. VII, in Leaflt. of 7192 Philippin. Bot. VIII, 1916, p. 2929. — Apothecia in epiphyllo immaculato dispersa, sessilia, primitus globosa, dein patellaria, sicca collabentia, nigra, glabra, 0,1 mm. diam., tenuissime parenchymatice fusce contexta, versus marginem coerulescentia; ascis clavatis, circa 30 × 10, 8-sporis, apice rotundatis, sessilibus, I-; sporis ellipsoideis, medio septatis, non constrictis, hyalinis, 9-10 × 3, distichis. Paraphyses tenerae, ramosae, subgelatinosae, epithecium fuscum formantes.

Hab. ad folia Psidii guayavae, Los Baños, Ins. Philipp. (M. B. RAIMUNDO).

9. Pezizella dakotensis Rehm, Ann. Mycol. XI, 1913, p. 396. — Apo-7193 thecia dispersa, sessilia, primitus globoso-clausa, dein patellariformiter explanata, orbicularia, disco dilute citrinulo, tenuissime marginato, extus glabra, 1-1,5 mm. lat., excipulo ad basim parenchymatice subfusce contexto, ad marginem pseudoparenchymatico, hyalino, hyphis ad marginem obtusis, -3 μ cr., haud distantibus, sicca convoluta, margine hyalino subconnivente. Asci clavati 50-60 \* 8,

8 spori, J +. Sporae clavatae, rectae, 1-cellulares, hyalinae, distichae,  $12 \times 2$ . Paraphyses filiformes, ad apicem 2  $\mu$  cr., hyalinae.

Hab. ad ramulos siccos Symphoricarpi occidentalis, Kulm N. Dak., America bor. (Brenckle). — Ad typ. Pezizellae tyrolensis Rehm spectans.

10. Pezizella ontariensis Rehm, Ascom. exsice. fasc. 52 n. 2030, et Ann. 7194 Mycol. XI, 1913, p. 167. — Ascomatibus dispersis, sessilibus plerumque in pagina inferiore acuum, primitus globoso-clausis, dein urceolatis, mox disciformiter explanatis, ad basim subconstrictis, tenuissime marginatis, 0,5-1,5 mm. lat., dilute luteo-albescentibus, glabris, siccis plerumque complicatis, disco roseolo, extus albide velutinis, excipulo tenui pseudoprosenchymatice contexto, ad basim fuscidulo; ascis clavatis apice subacutatis,  $-45 \times 6.7$ , octosporis, J+; sporis acicularibus, rectis, 1-cellularibus, hand guttatis, hyalinis, 12-15 × 1, distichis; paraphysibus filiformibus, hyalinis, 1,5  $\mu$  ad apicem 3  $\mu$  cr.

Hab. in acubus Pini resinosae Ait., prope Seath East Shore of Lake Huron, Ont., Canada (J. Dearness). — Pez. pulvinatae proxima sed sporis distincta.

11. Pezizella culmigena Sacc., Ann. Mycol. XII, 1914, p. 292.— Laxe 7195 gregaria v. sparsa, sessilis, disciformis, ceracea, ex albo chlorina, tota glabra, nitidula, 0,7 mm. diam., margine tenui, perce elevato; excipuli contextu ex cellulis subglobosis, tenerrimis 5-6 μ diam. subhyalinis formato; ascis tereti-clavatis, apice rotundatis, brevissime stipitatis, 60-70 × 4,7-6, paraphysibus filiformibus aequalibus obvallatis, octosporis; sporidiis distichis, cylindraceo-fusoideis, curvulis, utrinque obtusulis, 8-10 × 2,3-2,5, hyalinis.

Hab. in culmis Phrag mitis communis putrescentibus, M. Weisskirchen, Moravia (F. Petrak). — Affinis Peziz, citrinulae et P. micropsi.

12. Pezizella leucostigmoides Sacc. — Sacc., Syll. Fung. VIII p. 277. — 7196 var. juncella Sacc., Ann. Mycol. XII, 1914, p. 291. — Ascomatibus patellatis, vix 0.5 mm., subdiaphanis medio flavo-viridulis, extus asperulis; ascis 30-35 \* 4-4.5, clavulato-paraphysatis; sporidiis allantoideis, 4-6 \* 1.

Hab. in calamis emortuis Junci effusi, M. Weisskirchen, Moravia (F. Petrak). — Species valde affines videntur Pseudohelotium Teucrii (Fuck.) Sacc., Pseud. effugiens (Desm.) Sacc. et Pezizella viridi-flavescens Rehm.

13. Pezizella gemmata (Lorton) Saccardo, Miniaecia gemmata Lorton, 7197

Bull. Soc. Mycol. Fr. 1914, p. 226, t. XIII f. VI. -- Minutissima, 0,1-0,3 mm. lata, pyriformis, immarginata, substipitata, albido-diaphana; hymenio concolore; ascis claviformibus, octosporis, 120. 130  $\approx$  20; paraphysibus ramulosis, septatis aequalibus, vel ad apicem incrassatis, 3  $\mu$  circiter latis; sporis ellipsoideis distichis, continuis, saepe rugulosis vel diformibus intusque granulis repletis,  $14 \approx 8$ .

Hab. ad terram argillaceam et udam inter parvulas Hepaticas, Clessy, Gallia.

14. Pezizella Meuriesii (Boud.) Saccardo, Discinella Meuriesi Boud. in 7188
Bull. Soc. Myc. Fr. XXXIII (1917) p. 17, tab. VI fig. II, Calycella Menziesi Boud. in Trans. Brit. Myc. Soc. IV, pt. 1, 1912 p. 62, t. 2 fig. 2 (1913). — Pro genere [sub Calycella] et pt. II, 1913 p. 323 (1914).— Media, 0,5-1 cm. lata, pallide carnea, extus vix pallidior, glabra turbinata aut crasse pedunculata; ascomate carnoso, levi, hymenio et margine undulatis; ascis cylindraceo-clavatis, octosporis, inoperculatis, foramine marginato, 100-120 × 7-8; paraphysibus simplicibus vel ad apicem divisis, tenuibus, apicibus non incrassatis, 2 μ crassis; sporidiis fusiformibus, albis, rectis vel leniter curvatis, guttulis oleosis 2-3 et granulis minoribus repletis, 15-16 × 3,5-5.

Hab. ad terram argillosam in Scoka (MEURIES) et inter Muscos Silchester, Angliae (D. GARNOTT).

15. Pezizella aphanes Rehm in P. Strasser, Verh zool.-bot. Ges. Wien 719 69., 1919, p. 368. — Ascomatibus sessilibus tenuibus, prosenchymaticis, circ. 0,5 mm. latis ¹/₃ mm. altis, primum globosis dein apertis depressis; ascis cylindraceis infra angustato-pedicellatis 40-45 × 7-8; sporidiis ellipsoideis v. subfusoideis, unilocularibus, hyalinis, 8-10 × 3-4.

Hab. in ligno udo trito, Sonntagberg, Austria. — Sec. v. Höhnel, in Strasser l. c., verisimiliter est forma minor Hyaloscyphae dentatae Boud. Icon. tab. 523 et Pezizellae dentatae (Pers.) Rehm n. 5197. Proxima etiam Pezizellae granulosellae (Karst.) Rehm n. 5187 non Starbäck.

PEZIZELLASTER v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 7200 250 (nomen nudum). — A gen. Pezizella dentibus marginalibus distinctis diversum. — Huc pertinent P. radiostriatus (Feltg.) v. H., P. confusus v. H., P. similis v. H.

PSEUDOHELOTIUM Fuck.— Syll. VIII p. 291, VI p. 406, XIV p. 772, XVI p. 729, XVIII p. 63, XXII p. 662.

1. Pseudohelotium epicalamium (Fuck.) Sacc. — Syll. Fung. VIII p.229. — 7201 var. pertenue Sacc., Notae Mycol. XXII p. 177 (Acc. Pad. 1917). — Ascomatibus minutissimis, 120-140 μ diam., ex urceolato patellaribus, margine siccitate valde inflexis fimbriatulis, extus nigrescentibus disco albido; contextu subprosenchymatico, dilute fuligineo; ascis tereti-clavulatis, subsessilibus apice rotundatis, 35-40 × 4,7-5, octosporis; sporidiis cylindraceo-oblongis, saepe curvulis, utrinque obtusulis, 7-8 × 1,5-2, hyalinis; paraphysibus acicularibus, asco longioribus.

Hab. in foliis emortuis Brizae mediae loco Canepa, Rep. Sanmarin. Italia Centr. — Exiguitate omnium partium a typo recedit; quem typum cl. Rehm ad gen. Pezizellam ducit sed ascoma furfurellum est, hinc potius Pseudohelotii species.

MOLLISIA (Fr.) Karst. — Syll. VIII p. 321, X p. 12, XI p. 407, XIV p. 774, XVI p. 720, XVIII p. 65, XXII p. 664.

Mollisia undulata Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7202 1920 (1921), p. 155. — Molli carnosa sessili plerumque late affixa, concavo-discoidea, undulata, 5-8 mm. diam. griseo-livida, arescendo nigrescente, extus nigra; ascis anguste cylindraceis; sporis anguste oblongis, levibus hyalinis, 6 ≈ 1,5, paraphysibus filiformibus.

Hab. ad ligna putrescentia, Tasmania.

2. Mollisia alnicola Bubàk et Vleugel, in J. Vleugel, Svensk Bot. 7203 Tidskr, 11., 1917, p. 312. — Ascomatibus hypophyllis, dispersis vel gregariis, sessilibus, primo clausis, dein apertis, cupuliformibus, 2-4 mm. latis, siccis involutis, extus atro-brunneis, scabriusculis, contextu parenchymatico, brunneo, margine albido, fibrillis prosenchymaticis, densissimis, clavatis, basi brunneis, apice hyalinis ornatis, disco concavo, luteolo. — Ascis clavatis, 35-55 × 5-7, apice attenuatorotundatis, basi sensim in pedicellum brevem angustatis, hyalinis, octosporis, paraphysibus filiformibus apice crassioribus, hyalinis, 2 μ latis. — Sporulis distichis, fusoideis, 7-9,5 × 2-2,5 rectis, hyalinis, continuis, guttulatis.

Hab. in foliis anni praeteriti Alni incanae var. bore alis, Umea provinciae Vesterbotten Sueciae (J. VLEUGEL).

3. Mollisia atrata (Pers.) Karst. — Syll. VIII p. 354 (Pyrenopeziza) — 7204 var. major Rehm ap. Jaap, Verh. Bot. Ver. Prov. Brandenb. 57, (1915) p. 10. — A typo differt ascomatibus sporidijsque aliquan-

tum majoribus.

Hab. ad caules putrescentes Solidaginis canadensis. Triglitz in Prignitz, Germania - Ad M. atrocineream vergit.

4. Mollisia apiophila Dearness, Mycologia, 8., 1916, p. 98. — Ascoma. 7205 tibus, 0,3-1 mm., siccis contractis, carneis, subsessilibus, turbinatis; cellulis hypothecii elongatis septatis, 3-4 µ cr., excipuli globosoangulosis, tenui tunicatis, 10-12 µ diam.; ascis 75-80 × 10-12. p. sp. 45-52 μ long.; sporidiis biseriatis 2-4 guttulatis, navicularibus, hyalinis, 16-18 × 4-6; paraphysibus stratum flavidum formantibus.

Hab, in caulibus emortuis Apios tuberosae, London Ont.. Canada.

5. Mollisia albido maculans Sydow, Ann. Mycol. X, 1912, p. 409.— A. 7206 scomatibus in partibus ramorum albide decoloratis plus minus dense dispositis, sessilibus, primitus globoso-clausis, mox patellaribus, extus obscure cinereis, glabris, levibus, 0,15-0,3 mm. diam., crassiuscule marginatis, in sicco vix contractis, atris, disco cinereo; ascis clavatis, apice late rotundatis, 48-58 \* 10-12, octosporis; paraphysibus hyalinis, ad apicem 2-2,5 µ crassis; sporidiis oblique monostichis v. superne subdistichis, ellipsoideis, utrinque rotundatis, continuis, hyalinis, 11-14 × 5-7, eguttulatis.

Hab. in ramis Camelliae japonicae, prov. Mino, Kawauye-mura Japoniae (K. HARA).

6. Mollisia xerophila Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos 7207 Aires XXIII (1912) p. 101. - Ascomatibus plus minus dense gregariis, sessilibus vel brevissime pedicellatis, parvis, udis cupulatoapertis, 0,5-1 mm. diam., siecis contracto-subinvolutis, coriacellis, margine acutis, pilis brevibus, acutis, 10-25 \* 2-3, fuligineis fimbriatulis, ceterum glabris, atris, disco subalutaceo; ascis cylindraceis, obtuse rotundatis 160 × 6-7, basi in petiolo quadruplo breviore sat crasso productis, paraphysibus filiformibus parum longioribus cinctis, octosporis; sporidiis cylindraceo-botuliformibus, utrinque rotundatis, hyalinis, pusillis, 6-12, saepius 8-10 × 1,5-2.

Hab. ad ramos dejectos decorticatos Hualaniae colletioidis in dumetis circa Potrerillos prope Mendoza, Argentina.

7. Mollisia dermateoidea Rehm in Ber. Bayer. Bot. Gesellsch. XIV 7208 (1914) p. 89. -- Ascomatibus gregariis, late adnatis, initio globosoclausis dein urceolato-apertis demumque disco rotundato, plano, albo, tenuissime brunnescente, non albo-marginato, extus levibus, pallide brunneolis, 0,3-0,8 mm. diam., siccis haud involutis, contextu parenchymatico; ascis clavatis, apice obtuse attenuatis, 45

 $\approx$  6-8, octosporis, sporidiis clavato-fusoideis, reetis, continuis, hyalinis, 9-10  $\approx$  2,5, distichis; paraphysibus filiformibus, hyalinis, 2  $\mu$  crassis.

Hab, in caulibus siccis Cirsii spinosissimi ad glacies in monte Gottardo et in alpinis Tiroliae.

8. Mollisia lanaria C. E. Fairman, Ann. Mycol. IX, 1911, p. 150, fig. 7209 1-2. — Cupulis gregariis, hypophyllis, tomento matricis immersis, superficialibus, orbicularibus, minutis, circ. 250 μ latis, sessilibus brunneis, disco pallidiore; ascis cylindraceo-clavatis, breve stipitatis v. sessilibus, apice subrotundatis, plerumque rectis, probabiliter octosporis, 40-45 × 6-7, paraphysibus subcylindraceis; sporidiis bacillaribus, utrinque rotundatis, continuis, hyalinis, 14-24 × 2-3.

Hab. in pagina inferiore foliorum Antennaria e plantaginifoliae, Oak Orchard Creek road, Ridgeway N. Y., America boreali.

9. Mollisia cinerella Sacc.—Syll. VIII, p. 338 — fm. caespitosa A. L. 7210 Smith in Trans. Brit. Myc. Soc. IV, pt. I, 1912, p. 75 (1913). — Ascomatibus caespitose erumpentibus, sporidiis clavato-fusoideis utrinque guttulatis.

Hab. in ligno decorticato Fagi silvaticae, Binscarth, Anglia.

10. Mollisia Lesdaini Vouaux, Bull. Soc. Mycol. Fr. 1914, p. 180, Ne- 7211 solechia Lesdaini Vouaux in Bouly de Lesd., Rech. Lich. Dunk. p. 272 (an.?). — Ascomatibus sparsis sed numerosis quandoque 2-3 confertis, primum superficialibus sphaeroideis dein disco effuso plano v. patelliformi margine crassiusculo et irregulari praeditis; siccis obscure brunneis udis pallidioribus siccis irregulariter circularibus saepe angulosis v. elongatis, 80-150 µ diam., molli-ceraceis; excipulo pallide brunneo, pseudoparenchymatico e cellulis polygoniis 5-7 μ diam. margine elongatis apice pallidioribus efformato; ascis clavatis, sessilibus v. brevissime pedicellatis, tenuiter tunicatis, octosporis, 30-38 \* 5-7; paraphysibus filiformibus parce septatis, quandoque basi ramosis, 1-1,5 µ cr., apice parum inflatis et pallide flavescentibus; sporidiis oblique mono-v. distichis, oblongis saepius irregularibus curvis uno apice parum angustioribus, hyalinis, simplicibus, plerumque biguttulatis, 6-8 \* 2,5-3; epithecio tenuissimo, pallide brunneo-flavescenti, hypothecio hyalino, tenui.

Hab. in thallo Lecanorae effusae, prope Dunkerque, Gallia (BOULY DE LESDAIN).

## MOLLISIOPSIS Rehm — Syll. XXII p. 668.

Mollisiopsis lachnoideis Rehm, Ber. Bayer. Bot. Gesellsch. XIV (1914) 721
 p. 97. — Ascomatibus subgregariis, sessilibus, globoso-clausis dein expansis, disco pallido, extus granulis albis scabris, inferne brunneolis, sursum pallidis, 0,2-0,35 mm. latis; ascis clavato-rotundatis, 35-40 × 5-6, octosporis; sporidiis distichis oblongis, rotundatis, 1-locularibus, hyalinis, minute biguttulatis, 6 8 × 2; paraphysibus lanceolatis, acutis, hyalinis, medianiter 4-4,5 μ crassis.

Hab. in caulibus siccis Epilobii angustifolii prope Oberwaessen in alpibus Bavariae.

- CYATHICULA De Not. Syll. VIII p. 304, X p. 11, XI p. 407, XVI p. 1148. Pezoloma F. E. Clements, Minnesota Bot. Stud. P. II, v. IV, 1911, p. 186; Genera of Fungi 1909, p. 86, p. 175 (nomen n.) (Etym. a pezis cupula, loma frangia). Est Cyathicula sessilis (Peristomialis Phill., Cistella Quél).
- 1. Cyathicula grisea (Clem.) Trotter, Pezoloma griseum F. E. Clements, 7213 l. c. p. 186, tab. XXV fig. 2. Apotheciis superficialibus, sessilibus, plerumque sparsis, ceraceis vel coriaceo-ceraceis, cupulatis vel sentellatis, margine eximie dentibus gracilibus trigonis ciliato; dentibus acuminatis denticulatis hyalinis vel griseis, 150-200 μ long., 10-12 μ ad basim, ½-2 mm. lat., hymenio griseo, paraphysibus simplicibus filiformibus hyalinis, 120 × 2; excipulo prosenchymatico griseolo; ascis octosporis, anguste cylindraceis, jodo non tinetis, 110-120 × 9-10; sporis oblongis vel fusoideis, continuis hyalinis distichis minute polari-guttulatis, 15-18 × 3-4.

Hab. ad et inter radiculas udas Betulae occidentalis, Minnehaha 2700 m. alt, Amer. bor. (Crypt. Form. Colo. 292).

2. Cyathicula multicuspidata Rodway, Pap. a. Proc. R. Soc. Tasmania 7214 f. Year 1920 (1921) p. 154.— Cupulata sessilis alba delicata 1 mm. circ. lata, levi sed margine acute lobulata; ascis cylindraceis octosporis; sporidiis monostichis hyalinis levibus continuis, anguste oblongis, 15-20 \* 4 sed immaturis.

Hab. in rachide dejecto Dicksoniae, Tasmania.

- **PEZICULA** Tul. Syll. VIII p. 73 et 489, X p. 11, XIV p. 773; XVI p. 730, XXII p. 669.
- Pezicula Melastomatis Rehm, Ann. Mycol. IX, 1911, p. 368. Apo 7215
  theciis dispersis, in ramulo corticato denigrato erumpentibus, globulosis, dein patellaribus, versus basim contractis, glabris, margine

vix distincte einctis, hyalino-flavidulis, dein citrinis, planis, 0,3-1 mm. diam.; ascis elavatis, apice rotundatis,  $70 \times 12$ , octosporis; J ope violaceis; sporis oblongo-clavatis, rectis, 1-cellularibus, hyalinis, 15-17  $\times$  4-5, distichis; paraphysibus filiformibus, 2  $\mu$ , ad apicem obtusum 3  $\mu$  cr., hyalinis; excipulo parenchymatico, cellulis versus marginem elongatis, dilute flavido-hyalino.

Hab. ad ramulum Melastomaceae, Sao Leopoldo Rio Grande do Sul, Brasiliae (THEISSEN).

2. Pezicula myrtillinoides Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 7216 200. — Ascomatibus sparsis interdum 2-3-caespitosis, initio globosis et clausis, deorsum breviter attenuato-stipitatis, dein discum rotundatum, tenui-marginatum, planum, luteo-vitellinum ostendentibus, extus glabris, albido-flavis, 0,5·2 mm. latis, ceraceis; ascis clavatis, apice rotundatis, 70-90 × 12, octosporis; sporidiis oblique monostichis, oblongis, utrinque rotundatis, medio septatis, dein 3-septatis, hyalinis, 12-15 × 4-4,5; paraphysibus filiformibus septatis, 2 μ, sursum ad 5 μ crassis leniterque curvatis et flavescentibus.

Hab. in ramulis adhue vivis Vaccinii Myrtilli in Erzgebirge — A P. myrtillina praecipue colore et magnitudine ascomatum sed etiam sporidiis minutis et paraphysibus alienis recedit.

3. Pezicula eximia Rehm, Ann. Mycol. XI, 1913, p. 154. — Ascomatibus dispersis, plerumque solitariis, interdum binis primitus in natis, per corticem laciniatim fissum prorumpentibus, disco orbiculari tenuiter marginato, plano, flavorubidulo, 1-3 mm. diam., siccis subinvolutis margine albescente, excipulo flavide parenchymatice contexto; ascis clavatis, apice subattenuatis, -120 × 30, octosporis, poro J violacee tineto; sporis oblongis, utrinque rotundatis, rectis hyalinis, primitus 1-cellularibus guttulis minimis repletis, dein 3 (-5)-septatis, circ. 35 × 12-14, distichis; paraphysibus filiformibus 2,5 μ ad apicem -30 μ longe flavide tinetis, -10 μ cr., epithecium crassum formantibus.

Hab. ad corticem Populi, juxta London Ont., Canada, Amer. bor. (J. DEARNESS).

PYRENOPEZIZA Fuck. — Syll. VIII p. 354, X p. 17, XI p. 409, XVI p. 732, XVIII p. 71, XXII p. 670.

Pyrenopeziza podolica Grabowski, Bull. Soc. Mycol. Fr. 33., 1917, 7218
 p. 79 cum ic. — Ascomatibus paucis aggregatis v solitariis, immersis, primum margine involutis, dein poro rotundo prorumpentibus, cupuliformibus, circiter 200 μ diam., excipulo fusco paren-

chymatico marginem versus prosenchymatico (filiformi); hymenio albido; ascis clavatis 40-45  $\times$  6-8, paraphysibus filiformibus 1  $\mu$  latis, apice non incrassatis; sporidiis subcylindraceis, utrinque attenuatis (ex icone subrotundatis) mono-v. distichis, 6-8  $\times$  1-1,5, rectis v. lenissime curvulis (ex icone).

Hab. in foliis arescentibus Caricis Michelii adhuc vivis, Jaryszov, Podolia, Rossia.— A Pyr. Caricis Rehm differt ascomatibus minoribus, paraphysibus apice non incrassatis, a Pyr. multipuncta (Peck) Sacc., sporidiis minoribus et curvulis.

Pyrenopeziza compressula Rehm, — Syll. X1 p. 409. — var. Inulae 7219
 Jaap, «Fungi sel. exsice.» an. 1916; Verh. bot. Ver. Prov. Brandb.
 59., 1917, p. 27. — A typo praecipue recedit matrice et sporidiis majoribus (cylindraceo-fusoideis, utrinque rotundatis, 12-15 × 2-2,5, unilocularibus, 4-8 guttulatis).

Hab. in caulibus siccis vetustis Inula e salicina e, prope Triglitz in Pregnitz, Germania.

3. Pyrenopeziza Araliae v. Höhn., Fragm. z. Mykol. 781 in Stzgsb. 7220 Akad. Wiss. Wien CXXI, 1, p. 404 (1912).— Ascomatibus gregatim sparsis, primo epidermide tectis dein erumpentibus et epidermidis laciniis cinetis, rotundato-disciformibus, 200-350 μ crassis, 0,5-1 mm. latis, extus margineque fuscis, disco griseis; excipulo obscure brunneo, inferne usque ad 60 μ cr. e cellulis amplis composito superne tenuiore et cellulis minoribus, 4-5 μ latis constituto; hypothecio 140 μ crasso, inferne brunneo e cellulis 5-28 μ latis efformato, superne hyalino ex hyphis floceosis constituto; hymenio 60 μ alto; ascis sessilibus, anguste clavatis, 50-60 × 4-5, jodo non caerulescentibus; paraphysibus filiformibus 2-4 μ cr. apice parum incrassatis; sporidiis distichis, rectis, continuis fusiformibus, utrinque acutatis, 8-10 × 1,6.

Hab. in petiolis foliorum vivorum Araliae papyriferae, Tjibodas, ins. Java.

4. Pyrenopeziza ebulicola Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 7221 177. — Ascomatibus in foliis subatratis sparsis, initio clausis, immersis, dein erumpentibus, sessilibus, disco urceolato, incoloro, crassiuscule marginato, contextu brunneo, crassiusculo, parenchymatico, ad marginem cellulis elongatis praedito, basi hyphis brunneis, 4  $\mu$  cr., copiosis obsito; 0,5 mm. latis, siccis atris; ascis clavatis, 60·70  $\times$  10, octosporis; sporidis clavato ovoideis, continuis, hyalinis, 10  $\times$  4, distichis; paraphysibus filiformibus, hyalinis, 2  $\mu$ , sursum ad 6  $\mu$  crassis.

Hab. in foliis putrescentibus Sambuci Ebuli, in Jura helvetico (MORTHIER).

5. Pyrenopeziza polymorpha Rehm — Sacc. Syll. X1 p. 409. — f. Va-7222 lerianae Rehm, Ascom. Exsicc. fasc. n. 2121. — Ascomatibus primum immersis demum prominentibus insidentibusque nigris, levibus, basi parenchymaticis, siccis puberulis; sporis fusoideis utrinque acutis.

Hab. in ramis Valerianae officinalis, prope Weismain, Franconia sup. (ADE).

6. Pyrenopeziza andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 7223 Buenos Aires XXIII (1912) p. 101.— Ascomatibus superficialibus, subsessilibus vel brevissime pedicellatis, atro-fuligineis, coriacellis, glabris, 0,5-1 mm. diam., udis applanato-apertis, siccis undulato-contractis, disco non vel vix pallidiore, contextu denso olivascente; ascis subclavulatis, breviter crasseque pedicellatis, 50-55 × 5-6, apice crassiuscule tunicatis, paraphysibus fumosis crassiusculis, sursum subclavulatis densiuscule cinctis; sporidiis oblique distichis, e fusoideo subnavicularibus, utrinque acutiusculis, 7-9 × 2-2,5, hyalinis, minute 1-guttulatis.

Hab. ad caules emortuos, subputrescentes, decorticatos E u p atorii saucechicoën sis, in dumetis circa Potrerillos prope Mendoza, Argentina.

7. Pyrenopeziza pyrenocarpoides Rehm, Ber. Bayer. Bot. Ges. XIII 7224 (1912) p. 175. — Ascomatibus gregariis, sub cortice leniter atrata nidulantibus, globoso-clausis, dein erumpentibus et discum urceolatum album, crasse albidulo-marginato ostendentibus, extus glabris, atro-brunneis, 0,2-0,5 mm. latis, siecis arete involutis atris; excipulo minute parenchymatico; ascis oblongo-clavatis, apice obtuse attenuatis, 60-70 × 10, octosporis; sporidiis distichis, rectis vel leniter curvatis, continuis, utrinque 1-guttulatis, hyalinis, 15-18 × 3; paraphysibus filiformibus, hyalinis, 1,5 μ cr.

Hab. in caulibus emortuis Cirsii, Amrum, Schleswig. — P. Lychnidis proxima sed ascomatibus dimidio minoribus.

8. Pyrenopaziza Dearnessii Rehm, Ann. Mycol. IX, 1911, p. 286, Ascom. 7225 Exsice. fasc. 48 n. 1929.— Apotheciis gregariis caules ambientibus, primitus innatis, globoso clausis, per epidermidem laciniatam, haud decoloratam prorumpentibus, demum sessilibus, disco orbiculari tenuiter marginato, subfusco, 0,2-0,5 mm. diam., excipulum glabrum, membranaceum, parenchymatice versus marginem seriebus cellularum elongatis contextum, fuscidulum, sicea epidermidis laciniis

plus minusve obtecta; ascis clavatis apice rotundatis, 50 \* 7.8, J.; sporis oblongis, rectis, utrinque obtusis, 1-cellularibus, hyalinis, 6-8 \* 3, distichis; paraphysibus filiformibus 2 μ, versus apicem 3-3,5.

Hab. ad caules emortuos Apocyni androsaemifolii, Oakland prope London Ont., Canada (DEARNESS).

- 9. Pyrenopeziza Lycopsidis Rehm (ubi descripta?) var. Lythri 721 Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 174. var. Impatientis Rehm, loc. cit. Nomine nobis tantum notae.
- PYRENOPEZIZOPSIS v. Höhnel, Ber. deutsch. bot. ges. XXXV, 1917, 7227 p. 251. A Pyrenopeziza differt paraphysibus lanceolatis prominentibus. Typus gen.: Pyrenopezizopsis Noppeyana (Feltg., ut Lachnum) v. Höhn., l. c.
- PSEUDOPHACIDIUM v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, 7228 p. 358.— Non Dothideaceum ut A. antea extimabat sed potius ad Pyrenopezizas vergens.
- LEUCOPEZIS F. E. Clements, Minnesota Bot. Stud. P. II v. IV, 1911, p. 187; Genera of Fungi 1909, p. 90, 175 (nom. nud.) (Etym. leuchòs albus, pezis cupula, propter cupulam albo-pilosam).— Apothecia subsuperficialia, sessilia vel substipitata, carnoso-ceracea, cupulata, albo-pilosa sed non ciliato-marginata; hypothecium crassum. Asci octospori, cylindracei, jodo non tincti. Paraphyses simplice clavulatae. Sporae ellipsoideae, continuae, hyalinae, leves.
- 1. Leucopezis excipulata F. E. Clements, l. c. p. 187, tab. XXV fig. 3.— 7229 Apotheciis superficialibus vel interdum insculptis, subsessilibus solitariis vel gregariis, carnoso-ceraceis, cupulatis, rarius scutellatis, pilosis, margine crenulato, interdum hirsuto sed haud ciliato, hymenio aurantiaco, extus concoloribus, inferne pallidioribus, 1-5 mm. latis; paraphysibus simplicibus clavatis, septatis, undique granulis minutis aurantiacis asperatis 4 μ lat., clava longa, dilute aurantiaca, 6-7 μ lat.; hypothecio crasso, homogeneo filamentis crebro rotundato-inflatis composito, 300-400 μ cr.; excipulo distincto, elevato, pilis parallelis septatis dilutissime aurantiacis, 120-150 × 6, obsito, inferne pilis hyalinis compositis interdum ramosis; ascis octosporis cylindraceis, stipitatis, operculatis, jodo non tinctis, sed clavis paraphysium et pilis jodo virescentibus, 300 × 25; sporis monostichis, ellipticis, hyalinis, levibus, gutta 10 μ lat. praeditis, 20-24 × 15-16.

Hab. ad terram muscosam sub Salix et Betula, Mountain View, Pike's Peak, 2800 m., Amer. bor. (Crypt. Form. Colo. 117).—Nomen propter excipulum distincte elevatum.

- SPILOPEZIS F. E. Clements, Genera of Fungi 1909, p. 85, 175. Est Py-7230 renopeziza subiculata. Typus Pseudopeziza radians Rob. et Desm., Syll. VIII p. 724.
- TAPESIA (Pers.) Fuck. -- Syll. VIII p. 371, X p. 18, XI p. 110, XIV p. 775, XVI p. 734, XVIII p. 72, XXII p. 672.
- 1. Tapesia occulta Rehm, Ber. Bayer. Bot. Gesellsch. XIV (1914) p. 7231 101. Ascomatibus gregariis, initio globoso-clausis dein scutellato-apertis, disco applanato, scabro-marginato, pallide brunneolo, 0,3-1 mm. diam., siccis involutis, brunnee-atris; contextu basi parenchymatico, sursum e cellulis elongatis composito filamentisque brunneolis, septatis, obtusis, ad 7  $\mu$  crassis vestito; ascis clavatis apice rotundatis, 50-60  $\times$  4-6, octosporis; sporidiis distichis, subcylindricis, leniter curvatis, 1-locularibus, utrinque minute 1-guttulatis, hyalinis, 12-14  $\times$  2; paraphysibus filiformibus, 2  $\mu$  er., sursum luteolis.

Hab. ad basim culmorum emortuorum Calamagrostidis variae, Fürstenalpe Rethiae, Helvetia.

2. Tapesia nivea (Lorton) Saccardo, Arachnopeziza nivea Lorton, Bull. 7232 Soc. Mycol. Fr. 1914, p. 224, t. XII f. III. — Minuta, 0,5-1,2 mm. lata, sessilis, gregaria, nivea, subiculo arachnoideo candido, delicato, sat denso, flexuoso, ramoso insidens; primo concava, dein explanata; margine fimbriato; hymenio albo, ultimo dilute lutescente; ascis claviformibus, breviter pedicellatis octosporis, 140-150 × 15; paraphysibus filiformibus, ramosis, vel simplicibus, septatis; sporis bacillaribus uno apice leviter attenuatis, polystichis, 6-septatis, 60-65 × 3.

Hab. in fragmentis Fraxini, Quercus et in ramulis emortuis Callunae vulgaris, Rigny, Clessy, Gallia.— E subg. Arachnopezizae.

3. Tapesia fusca (Pers.) Fuck. — Syll. VIII, p. 374. — f. macrasca Pey-7233 ronel, Nuovo Giorn. Bot. it. N. S. 25., 1918, p. 421. — A typo differt ascis longioribus nempe 75-85 × 4,5-5, sporidis 9,5-14 × 2-2,5. — Hab. in trunco submerso R h o d o d e n d r i f e r r u g i n e i, La Tirièro (1400 m. Riclaretto, Vall. Valdens.), Italia bor.

PIROTTAEA Sacc., — Syll. VIII p. 386, X p. 19, XIV p. 776, XVIII p. 73, XXII p. 674.

1. Pirottaea gallica Sacc. — Syll. VIII p. 387 — var. aterrima v. Höhn., in P. Strasser, Verh. zool. bot. Ges. Wien 69., 1919, p. 368. — A typo recedit ascomatibus colore obscuriore, ascis cylindraceis sessilibus, 35-40 × 8-10; sporidiis elongato-fusoideis 7-8 × 2-3. — Habin caulibus siccis Salviae glutinosae, Sonntagberg, Austria.

LACHNELLA Fr.—Syll. VIII p. 391, X p. 19, XI p. 411, XIV p. 777, XVI p. 334, XVIII p. 76, XXII p. 675.

1. Lachnella Cerasi Noelli, Nuovo Giorn. bot. it. v. XXIV, 1917, n. 3, 7 p. 191. — Ascomate subsessili, deinde sessili, oblongo, urceolato scutellari, extus villoso, flavescente, deinde aperto, niveo, longitudine 2-2,5 mm., diam. 1 mm.; ascis clavatis elongatis 8-sporis, 112 × 12-15; sporidiis oblongis, curvulis, hyalino-chlorinis, guttulatis, continuis, 20-25 × 6-7,5. Paraphysibus hyalinis, 150 μ long.

Hab. in cortice Pruni Cerasi, Levone Canavese, Pedemontium, Italia bor.

2. Lachnella setiformis Rehm, Ascom. exsicc. fasc. 55 n. 2125, Ann. Mycol. XII, 1914, p. 174. — Syn. Ciliaria (Trichophaea) bicuspis Boud. 1896 = Lachnea bicuspis (B.) v. Höhn., Ber. deutsch. bot. Ges. 36., 1918, p. 310.— Ascomatibus plerumque gregariis, sessilibus, primitus globoso-clausis, dein disco patellari orbiculari albo flavido, 1-2 mm. diam. excipulo flavidulo pilis erectis, singularibus, acutatis, paullulum septatis, crasse tunicatis fuscis, circ. 400 × 20, obtecto, siccis convolutis; ascis cylindraceis, 150 × 15, octosporis; sporis ellipsoideis 1-cellularibus, biguttulatis, hyalinis, 12-15 × 8-10, monostichis, paraphysibus filiformibus 2- ad apicem 3 μ cr., hyalinis.

Hab. ad ramulos putridos Populi canadensis, Triglitz-Prignitz, Germaniae (JAAP).

Hab. in culmis dejectis Junci squarrosi, Greenay Hill in Birsay, Anglia.— Dasyscyphae Rohmii (Staritz) Sacc. similis sed

perfecte sessilis et multo minor.

4. Lachnella brunneo-ciliata A. L. Smith, Trans. Brit. Myc. Soc. IV 7238 pt. I, 1912, p. 75 (1913). — Ascomatibus sparsis, stipitatis, cupulatis obscure brunneis, margine setis brunneis  $60 \approx 4$  asperatis, 300-600  $\mu$  diam., stipite aequilongo, hymenio pallide cinereo; ascis cylindraçeo-clavatis, octosporis,  $65 \approx 7$ , paraphysibus crassiusculis, acutis, ascos superantibus,  $80 \approx 5$ ; sporidiis oblongo-ellipsoideis vel subcymbiformibus, obtusis, 1-septatis,  $12-14 \approx 3-4$ .

Hab. in culmis dejectis Junci squarrosi ad lacum Banks in Birsay, Anglia.

- LACHNUM Retz. Syll. XVIII p. 77, XXII p. 676. Syn. Dyslachnum F. E. Clements, Genera of Fungi 1909, p. 87, 175 (ut Lachnum sessile).
- 1. Lachnum crystalligerum Sacc., Nuovo Giorn. bot. it. v. XXVII, 1920, 7239 p. 79. Mycologia 12., 1920, p. 203. Ascomatibus gregariis superficialibus 1 mm. latis, ceraceis brevissime crasse stipitatis, molliter dense pilosis, initio indumento candidis, demum (abnormiter?) ochraceis, cupula diu clausa, globosa, dein anguste dehiscente et discum melleum ostendente; pilis filiformibus hyalinis, 100-120 × 3-3,5, continuis, divergentibus, apice in capitulum eximium crystallinum, muricatum 12 μ cr. desinentibus; ascis tereti-clavatis, apice rotundatis, breviter stipitatis, 70 × 8, paraphysibus cuspidatis longioribus obvallatis, 8-sporis; sporidiis distichis, cylindraceis, 8-9 × 2,2, utrinque rotundatis, hyalinis, rectis v. leniter curvis, excipulo melleo.

Hab. in ramis emortuis corticatis Rubi parviflori, Spokane, Washington, nec non ft. Douglas Utah, Amer. bor. (WEIR).—Affinis Dasysc. crystallinae Fuck., differt vero ascomate brevius stipitato, ascis crassioribus, excipulo discoque melleo pilis uniformibus etc. Pili demum capitulum crystallinum amittunt.

2. Lachnum Adenostylidis Rehm, Ascom. exsicc. fasc. 53 n. 2059, Ann. 7240 Mycol. XI, 1913, p. 392. — Apothecia gregarie sessilia, primitus globoso-clausa mox patellariformiter explanata, disco orbiculari tenuissime marginato, albo-flavidulo, 2-3 mm. lato, excipulo membranaceo pilis creberrimis rectis, filiformibus, apice rotundatis, septatis, scabriusculis, hyalinis, -300 μ longis, aequaliter 4-5 μ latis hirsuto, sicca involuta, disco flavo. Asci cylindracei, apice rotundati, 50-60 × 4-5, 8-spori. J +. Sporae oblongo-fusiformes, rectae, 1-cellulares, hyalinae, 10-12 (—14) × 1,5-2, distichae. Paraphyses lanciformes,

valde acutatae, longe prominentes, medio 6 μ cr.

Hab. ad caules putrescentes Adenostylidis alpinae in valle posteriore Wimbach ad pedem montis Watzmann alpium Bavariae, c. 1200 m. alt. (REHM).

3. Lachnum japonicum Sydow, Ann. Mycol. X, 1912, p. 409. — Apol. 7 theciis subgregariis, sessilibus primo globoso-clausis, dein apertis et cupulatis, 1-2 mm. latis, ceraceis, extus sordide brunneis, disco pallido in sicco roseolo, extus praecipue ad marginem dense pilosis; pilis simplicibus, 225-300  $\mu$  long. 4-5 cr., septatis, rectis, ad apicem obtusis, sordide flavo-brunneis, lenissime asperulis; ascis cylindraceo-clavatis, apice rotundatis, 75-100  $\approx$  5,5-8, octosporis; paraphysibus lanceolatis, hyalinis, apice acutis, ascos superantibus, 4-6  $\mu$  latis; sporidiis distichis, cylindraceis v. crasse allantoideis, plerumque leniter curvulis, continus, hyalinis, eguttulatis, utrinque rotundatis, 13-17  $\approx$  3-3,5.

Hab. in caulibus Boehmeriae niveae, Kawanye prov. Mino, Japoniae (K. Hara).

Lachnum sphaerocephalum (Wallr.) Sacc. — Syll. VIII p. 466 (Da-124 syscypha) — var. transiens Rehm, Ascom. exsicc. fasc. 53, n. 764 b
 Ann. Mycol. XI, 1913, p. 395. — Ad Lach. carneolum (Sacc.) Rehm vergens. — Pili infra flavo-brunnei, supra incolores.

Hab. in foliis putrescentibus Holci lanati, Triglitz in Prignitz, Germania (JAAP).

5. Lachnum carneolum (Sacc.) Rehm. — Syll. VIII, p. 447 (Dasyscypha), 734
f. hyalinum Rehm, Ann. Mycol. IX, 1911, p. 287, Ann. Exsice. fasc.
48 n. 1931. — A typo differt colore albo-niveo et pilis rectis, levibus aequaliter 5 μ cr. drusam crystallinam 10 μ cr. gerentibus.

Hab. in foliis siccis Graminum, Riesengebirges, Germania (H. Sydow).

- LACHNASTER v. Höhnel, Ber. deutsch. bot. ges. XXXV, 1917, p. 250.—
   A gen. Lachnum sensu Rehm, pilis acutis tenuibus squamulas dentesque marginales efformantibus diversum.
- 1. Lachnaster gracilis v. Höhnel, l. c. (nomen nudum).

UNGUICULARIA v. Höhnel 1905 (= Phatothrix Clements 1909) v.
 Höhnel, Ber. deutsch. bot. Ges. XXXV. 1917, p. 249. - Sacc., Syll.
 XXII p. 682.

1. Unguicularia raripila v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 7243 1917, p. 248 (nomen nudum). — Strasser, Verh. zool.-bot. Ges. Wien

7244

69., 1919, p. 368.— Pilis sparsis distincta (enfr. Fragmente z. My-kol. 1015, in Sitzb. d. k. Ak. d. Wiss. Wien 1917). — *Hab.* in caulibus putridis Lavatera ethuringiaca e Sonntagberg, Austria (STRASSER).

- DASYSCYPHA (Fr.) Fuck. Syll. VIII p. 432, X p. 21, XI p. 412, XIV p. 779, XVI p. 735, XVIII p. 81, XXII p. 683.—Phalothrix F. E. Clements, Minnesota Bot. St. P. II v. IV, p. 186; Genera of Fungi 1909, p. 88, 175 (Etym. phàlos nitidus et thrix pilum): est Dasyscypha pilis unicellularibus nitidis ornata, typ. Das. hyalothrica Rehm, Syll. XI p. 412.
- 1. Dasyscypha ovina Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7246 1920 (1921), p. 156. E superficiali erumpens; sessile cupulata excipulo discum excedenti, extus crebre lanigera et cellulis globosis dense tecta, pallide ochraceo-brunnea, 1-2 mm. diam.; ascis cylindraceis octosporis; sporis monostichis late ellipsoideis, obtusis, levibus maturitate brunneis, 14 × 8; paraphysibus angustis apice clavatis olivaceis.

Hab. ad corticem emortuam, Tasmania.

2. Dasyscypha pteridophylla Rodway, Pap. a. Proc. R. Soc. Tasmania 7247° f. Year 1920 (1921), p. 158. — Cupulata, breviter angusteque stipitata, undique flavo-citrina 0,3 mm. circ. diam., extus breviter tenuiter pilosa; ascis cylindraceis, octosporis; sporis distichis, fusoideis, acutis, hyalinis, 16 × 1,5; paraphysibus filiformibus.

Hab. in stipite Dicksoniae, National Park, Tasmania.

- 3. Dasyscypha conicola Rehm ap. Jaap, Verh. Bot. Ver. Prov. Bran-7248 denb. 57 (1915) p. 9.— Ita vocanda D. pulverulenta (Lib.) Sacc. fm. conorum Rehm.
- 4. Dasyscypha Puiggarii Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 7249
  Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 180.— Laxe gregaria,
  alba, ascomatibus parvis turbinatis pedicello ipso aequantibus suffultis, adpresse denseque villosulis, pilis asperulis, disco concaviusculo albo; ascis subfusoideis longiuscule attenuato-pedicellatis,
  paraphysibus filiformibus aequilongis obvallatis 40 × 3; sporis minimis lineari-lanceolatis utrinque acutis hyalinis.

Hab. ad frustula decomposita prope Apiahy, Brasilia (F. PUIG-GARI).

5. Dasyscypha triglitziensis Jaap, « Fungi sel. exsicc. » n. 756, an. 7250 1916; Verh. bot. Ver. Prov. Brandb. 59., 1917, p. 26. — Nomine nobis tantum nota.

Hab. in acubus putrescentibus Pini silvestris prope Triglitz in Pregnitz, Germania.

6. Dasyseypha Ivae Rehm, Ann. Mycol. XI, 1913, p. 397.— Apothecia 72 gregaria, innata, emergentia, mox sessilia, primitus globoso-clausa, dein urceolata, mox explanata, ad basim constricta, primitus extus citrina, dein fuscidula, disco orbiculari dilute roseolo, dein rubidulo, ad marginem tenuiter fimbriato, 0,5-1,3 mm. diam., excipulo crasso, parenchymatice flavidule contexto, imprimis versus marginem pilis rectis, septatis, asperatis, hyalinis, obtusis, demum flavidis, arcte congestis, -150 × 4-5 obsesso; apothecia sicca complicata, senilia extus subfusca. Asci cylindraceo-clavati, apice rotundati, -70 × 9, J-, 8-spori. Sporae oblongae, rectae, 1-cellulares, non guttatae, hyalinae, -12-14 × 3, distichae. Paraphyses filiformes, septatae, haud clavatae, 4 μ lat.

Hab. ad caules exs. I vae xanthiifoliae, Kulm N. Dakota, America bor. (BRENCKLE). — Proxima D. flavofuligineae (Alb. et Schw.) et praecipue Pezizae alboluteae (Pers.).

7. Dasyscypha sulphuricolor Peck, N.Y. State Mus. Bull. 157 (1911); 7252 p. 25 et 109 (1912). — Ascomatibus sulphureis, gregariis vel subcaespitosis, subsessilibus, 1-3 mm. latis, minute villosis; disco plano vel convexo, ascomatis margine incurvo cincto; ascis subcylindraceis, 70-80 × 3-4; paraphysibus filiformibus obvallatis, sporidiis oblongis vel subfusiformibus, 10-12 × 2-3.

Hab. in ligno emortuo Fraxini nigrae, Remsen, Oneida co., Amer. bor. — Affinis D. pulverulentae (Lib.) Sacc. sed variis notis distincta.

8. Dasyscypha heterochaeta Sydow, Ann. Mycol. XI, 1913, p. 61.— A. 7288 scomatibus hypophyllis, sparsis, calyciformibus, 150-180 μ diam., basi in stipitem brevem ca. 50-60 μ altum et crassum attenuatis, disco albido-griseolo, in sicco atris, ad marginem pilis numerosis 60-90 μ long. 4-6 μ cr. flavidulis v. subhyalinis apice obtusis subcontinuis dense asperulls obsitis, praeterea ad marginem et totam superficiem exteriorem setis obscure castaneo-brunneis continuis ad apicem acutis 60-90 μ long. 3-7 μ cr., levibus laxim obsitis, ceraceis, contextu pallide ochraceo v. pallide brunneolo; ascis cylindraceo-clavulatis, 30-40 × 6-7, octosporis, apice plerumque obtusis; paraphysibus tenuissimis, filiformibus, hyalinis, ascos aequantibus, ca. <sup>2</sup>/<sub>4</sub> μ cr., superne non incrassatis; sporidiis distichis, anguste oblongis, continuis, hyalinis, 5-7 × 1,5.

Hab. in foliis emortuis Corylopsidis sp., Kawanye-mura

prov. Mino, Japoniae (K. HARA).

9. Dasyscypha Cyatheae Rehm, Ascomyc. Philipp. VI, Leaflets of Phi- 7254 lipp. Botany, VI (1914) p. 2280. — Ascomatibus sessilibus, 2-3 arcte congregatis, ad basim connatis, cyathoideis, brevissime stipitatis, disco circulari roseolo, 0,4 mm. latis, 0,5 mm. altis, niveis, prosenchymatice contextis, pilis creberrimis nitentibus, hyalinis, rectis, 2  $\mu$  latis, fragilibus obtectis; ascis clavatis, apice rotundatis,  $60 \times 4$ , J +; paraphysibus filiformibus, 2  $\mu$  circ. cr., nucleatis, byalinis, ascos superantibus; sporidiis distichis clavatis, rectis, unicellularibus, hyalinis,  $12 \times 2$ .

Hab. in rachide emortua C y a the ae caudatae, Mt. Maquiling prope Los Baños, ins. Philipp. (C. F. BAKER). — Nudo oculo vix conspicienda, a D. Merrillii Syd. valde diversa.

10. Dasyscypha Merrillii Syd., Enum. Philipp. Fungi II, in Philipp. 7255 Journ. of Sci. VIII (1913) p. 500.— Ascomatibus sparsis, solitariis, cupulatis, breviter stipitatis, flavo-citrinis, 300-500 μ latis, extus furfuraceo-pilosis; pilis brevibus, hyalino-flavidis, asperulis, 3-4,5 μ crassis; stipite albo-flavido, 200-250 μ longo, disco citrinulo; ascis tereti-clavulatis, 50-70 × 4-6, octosporis; paraphysibus simplicibus, filiformibus, 1 μ crassis; sporidiis 2-3-stichis, acicularibus, vel angustissime fusoideis, rectis, hyalinis, continuis, 13-16 × 1,5.

Hab. in stipitibus emortuis C y a the ae, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (MERRILL). — Affinis D. Oncospermatis, a qua ascis et sporidis minoribus differt.

11. Dasyscypha (Torrendiella) ciliata (Boud.) Sacc.,\*) Torrendiella ciliata 7256 Boud., Bull. Soc. Mycol. Fr., 1911, p. 133, t. VI f. III.— Minuta, 2 3 mm. lata, totidem alta, stipitata, pallida, sed subtus brunneo hirsuta, margine ciliato. Receptacula albido-ochracea, extus pilis levibus fuscis, acutis, non granulosis, sparsis, obsita, ad marginem longioribus et ciliatis, multiseptatis, 200-300 µ longis, 10-15 spissis; hymenio plano, pallido; pediculo sat breve. Paraphyses rarius divisae; tenues ad apicem vix incrassatae, hyalinae aut granulis

<sup>\*)</sup> Torrendiella Boud., Bull. Soc. Mycol. Fr. 1911, p. 133 (Etym. a cl. Mycologo ab. Torrend). — Receptacula stipitata, hirta, epixyla; paraphysibus gracilibus, simplicibus aut divisis, ad apices non aut vix incrassatis, thecas non superantibus. Thecae clavatae inoperculatae, octosporae, sporae cylindrico-oblongae, obtusae, sat majores hyalinae. — Gen. Dasyscyphae proximum a quo differt paraphysibus gracilibus nec fusiformi acuminatis, ascis majoribus et obtusioribus, sporis etiam majoribus cylindraceo-obtusis curvatisve.

paucis repletae, thecas non superantes. Thecae clavatae, ad apicem obtusae, ad basim attenuatae, inoperculatae, octosporae, 130-140 u longae, 8-10 latae. Sporae hyalinae, curvatae, oblongo-cylindricae. extremitatibus obtusis, intus non granulosis, sed protoplasmate in 2-3 massas obscure limitatas repletae, 15-18 longae, 5-6 crassae. Hab. Lisbonne, Lusitania (REV. TORREND).

MICROSCYPHA Sydow, Ann. Mycol. 17., 1919, p. 38. - Ascomata mi. 72: nuta, breviter pedicellata, extus et margine pubescenti, ceracea. tenui, excipulo e cellulis brevibus prismaticis efformato. Asci elavato-cylindracei, octospori, paraphyses filiformes. Sporae hyalinae continuae, parvae fusoideae. - Huc pertinet sec. Sydow Dasyscypha grisella (Rehm) Sacc., Syll. VIII p. 467.

DASYPEZIS F. E. Clements, Genera of Fungi 1909, p. 88, 175. - Est 72 Dasyscypha sessilis. - Typus Trichopeziza albolutea (Pers.) Sacc., Syll. VIII p. 412.

## Sect. 2. Phaeosporae

PHAEOPEZIA Sace. Syll. VIII p. 741, X p. 24, XI p. 414, XIV p. 781, XVI p. 738, XVIII p. 90.

1. Phaeopezia Detonia (Brenckle) Saccardo, Lamprospora Detonia Bren- 7259 ckle, Mycologia, S., 1916, p. 318. - Sparsa; ascomatibus 5-12 mm. diam., sessilibus, patellatis, margine ad 0,7 mm. elevatis; regularibus, siccis convolutis; hymenio levi, e concavo plano, ex atrobrunneo-nigricante-viridulo; extus brunneis rugoso-verrucosis; ascis eylindricis, 300 × 15, octosporis; sporidiis monostichis in asci superiori parte, initio levibus, grosse 1-guttatis, dilutis, demum minute verrucosis, brunneis opacisque, 12-15 μ diam.; paraphysibus gracilibus, flavidis, apice incrassatis et coloratis.

Hab. inter Muscos ad terram udam in silvis pr. Anselm N. Dak., Amer. bor. - Sporidia sub sole ab asco rapide exsiliunt, ob aeris dilatationem jam in inferiore ascorum parte constipati. Videtur valde affinis Phaeopeziae murinae et Ph. scabrosae: immo ab hac postrema forte non differt.

2. Phaeopezia congregata (Wakef.) Saccardo, Plicaria congregata Wa- 7260 kefield, Gard. Kew Bull. 1917, p. 109.— Ascomatibus subcupulatis v. demum convexo-expansis, undulatis, 0,5-1,5 cm. diam., extus verrucosis, brunneis, disco concolori; ascis cylindricis, breviter sti-

pitatis, octosporis,  $230 \times 15$ -17, parte sporif. 110  $\mu$  longa; paraphysibus hyalinis, simplicibus, sursum clavatis, 6-8  $\mu$  latis; sporidiis globosis, grosse verrucosis, pallide fuscescentibus 15-16  $\mu$  diam.; hypothecio et excipulo parenchymatico; hypothecia cellulis ad 80  $\mu$  diam., excipulo minoribus; cellulis exterioribus brunneis, hic inde in verrucas aggregatis.

Hab. ad ligna combusta, Gambari Forest Reserve, Nigeria merid.

LAMBERTELLA v. Höhnel, Fragm. z. Mykol. XXI, 1918 n. 1078, p. 47. — Est Sclerotinia phaeospora.

57

1. Lambertella Corni-maris v. Höhnel l. c.; P. Strasser, Verh. zool.-bot. 7261 Ges. Wien 69., 1919, p. 368.

Hab. in fructibus mummificatis Corni maris, St. Georgen in Klaus prope Sonntagberg, Austria Inf. (LAMBERT).

ALEURINA Sacc. — Syll. VIII p. 472, XVI p. 738, XVIII p. 88, XXII p. 687.

1. Aleurina aquehongensis Seaver, Mycologia 6., 1914, p. 278 t. 144 7262 f. 5.— Sessilis, e discoidea leviter cupulata, 1 cm. circ. lata, extus rugulosa, brunneo-nigra et supra leniter viride tineta; ascis supra cylindraceis infra substipitiformi angustatis, 300-350 × 15-17; sporidiis monostichis v. quandoque subconfertis, ex ellipsoideis subfusoideis utrinque angustatis, 1-2 guttulatis primum levibus dein irregulariter subreticulatim rugulosis, hyalinis, 20-25 × 10-12, dein pallide brunneo-fuligineis, colore plus minus evanescente; paraphysibus apice incrassatis, 6 μ diam., pallide brunneis.

Hab. gregaria vel sparsa, ad terram, Oakwood Heights Staten Island, Amer. bor. (N. L. BRITTON et SEAVER).

TRICHALEURIS F. E. Clements, Genera of Fungi 1909, p. 90, 175.— 7263

Est Aleurina setosa. — Typus A. crinita Bull.

TRICHALEURINA Rehm, Ascom. Philipp. V, Leaflets of Philipp. Bot. VI, 1914, p. 2434 (Etym thricos pilus et Aleurina). — Est Aleurina longe pilosa.

1. Trichaleurina polytricha Rehm, l. c.— Ascomatibus sessilibus, caespitose aggregatis, breviter stipitatis, primitus urceolatis dein disco orbiculariter ad 7 cm. explanato, crenulato-marginato, demum vario modo complicatis, disco fuscidulo; excipulo fusco, subcoriacee con-

texto, versus basim costato-rugoso, ceterum pilis rectis, filiformibus, septatis, e cellulis 12-18  $\mu$  longis formatis, obtusis, seabris, 1 mm. usque longis, ad basim 15  $\mu$  circ. latis, hyphis simplicibus, longioribus, pallide fuscidulis, 3-4  $\mu$  cr. intermixtis densissime obtectis; ascis cylindraceis, apice rotundatis, 300  $\mu$  usque altis, 20  $\mu$  latis; paraphysibus filiformibus, subfuscis, 3  $\mu$ , ad apicem 5  $\mu$  usque latis; sporidiis oblongis vel oblongo-fusiformibus, continuis, rectis, hyalinis, 2-3-guttulatis, postremo fuscidulis, 25-33  $\approx$  12-15.

Hab. ad ligna putrescentia, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

PODALEURIS F. E. Clements, Genera of Fungi 1909, p. 89, 175. — 726. Est Aleurina stipitata. — Typus P. reperta Boud.

BENGUETIA Syd., Ann. Mycol. 15., 1917 p. 252 (Etym. a prov. Benguet ubi fungillus nascitur). — Ascomata erumpenti-superficialia, pede centrali brevi profunde in matrice immersa, coriaceo-carbonacea, atra discum planum vel convexum mox nudantia, marginata, hypothecio crasso parenchymatico; asci clavati, octospori; paraphyses epithecium formantes; sporae ellipsoideae, continuae, coloratae.

1. Benguetia omphalodes Syd., l. c. fig. II.— Ascomata amphigena plerumque epiphylla, sparsa vel subinde etiam bina aut trina aggregata, plerumque orbicularia, 1·2 mm. diam., 300·450 μ alta, atra, pede centrali brevi crassoque profunde in matrice immersa, coriaceocarbonacea, centro minute umbilicata, marginata, hypothecio crasso parenchymatice e cellula irregulariter rotundatis (saepimentis crassis) magnitudine variabilis plerumque grossis brunneis composito pede e cellulis similibus in medio rotundatis ad latera elongatis composito, mox discum planum vel saepius leniter convexum atrum nudantia, hymenio 100·120 μ alto, e strato flavido irregulariter fibroso oriundo; asci clavati, 70·80 × 13·17, superne rotundati, octospori; paraphyses ascos superantes, superne late clavato-incrassati et epithecium atro-violaceum vel atro-lilacinum formantes; sporae oblique monostichae vel distichae, ellipsoideae, continuae, plasmate violaceo-brunneo, episporio hyalino, 13·15 × 6.5-8.

Hab. in foliis vivis Pygei sp., Benguet, Luzon, Ins. Philipp. (E. D. MERRILL).

## Sect. 3. Hyalodidymae

HELOTIELLA Sacc.— Syll. VIII p. 474, XI p. 415, XIV p. 782, XVI p. 740, XVIII p. 93, XXII p. 688.

Helotiella Laburni A. L. Smith, Trans. Brit. Myc. Soc. IV, pt. I, 7267 1912, p. 76 (1913). — Ascomatibus minutis, sparsis, sessilibus, initio globosis, urceolatis, albo-luridis vel pallide brunneis, 200 μ latis, margine ciliatis, setis pallide brunneis, non septatis, 60 65 × 3; ascis cylindraceo-clavatis vel clavatis, 70 × 10-12, octosporis, paraphysibus gracilibus obvallatis; sporidiis oblongis, obtusis, 1-septatis, ad septum constrictulis, hyalinis, 13 × 5.

Hab. in ramulis Cytisi Laburni, Binscarth, Anglia. — Cum Niptera Raineri (De Not.) Sacc. comparanda.

PERROTIELLA Naoumoff, Champ. Oural. I (1915) p. 26 (a gen. Perrotia, cui affinis). — Ascomata sessilia, primitus globoso-clausa, dein urceolata v. subglobosa, ceraceo-carnosa, laeticoloria, extus glabra, raro pilis solitariis simplicibus conspersa, contextu parenchymatico. Asci teretes, sessiles, apice rotundati, octospori, inoperculati, paraphysati. Sporidia ellipsoidea, 1-septata, hyalina, monosticha. — Genus Langiae forte affine.

Perrotiella uralensis Naoumoff, l. c. p. 26 t. II f. 13 a.d. — Ascomatibus gregariis ochraceo-fuscis, subdiaphanis 300 μ diam.; ascis cylindraceis, 55 × 7; sporidiis late ellipsoideis, medio 1-septatis, non constrictis, 2-guttatis, 11-13 × 5, hyalinis, paraphysibus filiformibus, simplicibus, hyalinis.

Hab. in cortice Tiliae cordatae, Perm, Ural, Rossia.

NIPTERA Fr. em. Sacc. — Syll. VIII p. 480, X p. 24, XI p. 416, XIV p. 784, XVI p. 471, XVIII p. 94, XXII p. 691.

1. Niptera Callunae Sydow, Mycoth. germ. fasc. XX n. 1000, Ann. Mycol. IX, 1911, p. 556. — Apotheciis sparsis v. paucis aggregatis, sessilibus, 1/2-1 mm. latis, disco albido v. albido-griscolo, margine tenuiter inciso, extus atris v. atro-brunneis, ceraceis, contextu parenchymatico; ascis clavatis, apice obtuse acutiusculis, 40-60 × 7-10, octosporis; sporidiis cylindraceis v. fusoideis, saepe leniter inaequilateris, utrinque plerumque attenuatis, hyalinis, utrinque 1-guttulatis, diutissime continuis, sero spurie 1-septatis, distichis, 13-

17 × 3-4; paraphysibus filiformibus, 2-2,5 μ cr., apice non v. vix incrassatis.

Hab. in caulibus emortuis Callunae vulgaris, prope Kirkeby ins. Röm, Germania? (H. Sydow).

2. Niptera aureo-tincta Syd. ap. Fuhrmann et Mayor, Voy. Expl. scient. 7270 Colombie, in Mém. Soc. neuchât. Sc. Nat. V, p. 437 (1913). - A. scomatibus in maculis sordide fuscis, irregularibus, 2-8 mm. latis, saepe confluentibus, aggregatis, epiphyllis, 200-300 µ diam., ceraceis, sessilibus, primitus globoso-clausis, dein disco plano tenuiter marginato amoene aureo-tincto, extus fuscidulis, in sicco sordide succineo-fuscis et contortis, glabris, parenchymatice contextis; ascis cylindraceo-clavatis, apice rotundatis, breviter stipitatis, octosporis, 48-58 × 8-10; sporidiis oblique monostichis usque distichis, oblongis vel subfusoideis, utrinque obtusis, medio 1-septatis, non vel vix constrictis, hyalinis, 9-11 \* 2,5-3,5; paraphysibus filiformibus, hyalinis, 1.5, ad apicem 2,5 \mu crassis.

Hab. in foliis vivis Tibouchinae Bourgeanae in regione andina (dep. Antioquia) prope Medellin, Columbia, alt. 1550 m.

3. Niptera Grewiae Rehm, Ascom. Philippin. VII, in Leaflt. of Phi- 7271 lippin. Bot. VIII, 1916, p. 2928. - Apothecia in epiphyllo immaculato late dispersa, sessilia, primitus globosa, dein urceolata, mox explanata, orbicularia, glabra, 0,2-0,25 mm. lata, nigra, disco hyalino acute marginato, excipulo parenchymatico, coeruleo-violaceo; ascis clavatis, rotundatis, 40 × 10, 8-sporis; sporis fusoideis, utrinque attenuatis, medio septatis et subconstrictis, utraque cellula 1guttata, 12-14 \* 4, distichis. Paraphyses filiformes, hyalinae, 1 μ. Hymenium J + .

Hab. ad folia Grewiae, Los Baños, Ins. Philipp. (C. F. BAKER).

4. Niptera luitpoldina Rehm, Ber. Beyer. Bot. Gesellsch. XIV (1914) p. 7272 103. — Ascomatibus sparsis, interdum 2-3 aggregatis, sessilibus, primitus clausis dein disco scutellato, nitide marginato, pallido apertis, extus brunneis, levibus, basim versus attenuatis, 0,5-1,5 mm. latis, siccis curvatis et plus minusve involutis; contextu inferne parenchymatico, brunneo, crassiusculo, marginem versus ex hyphis parallele dispositis efformato; ascis clavatis, apice subacuminatis, 60-75 × 6-7, octosporis; paraphysibus filiformibus, obtusis, hyalinis, 2-3 μ crassis; sporidiis distichis, fusiformibus, utrinque acutatis, rectis, medio septatis, non constrictis, hyalinis, 12-15 × 1,5 ⋅ 2.

Hab. in acubus siccis Pini Pumilionis prope Luitpold-

Haus in Algäu, Bavaria.

5. Niptera microscopica (Crouan) Vouaux, Bull. Soc. Mycol. Fr. 1914, 7273 p. 182. Lecidea microscopica Crouan, Fl. Finist, p. 92.— Ascomatibus hemisphaericis, albis, 0,5 mm. diam.; ascis in superficie ascomatum parum prominentibus, subclaviformibus, 8-sporis; sporidiis ovoideis, granulosis, hyalinis, unisentatis.

Hab. in thallo Lecideae uliginosae, Finistère (CROUAN).

6. Niptera Mülleri (Willey) Vouaux, Bull. Soc. Mycol. Fr. 1914, p. 182, 7274 Phacopsis Mülleri Will., Enum. Lich. Massach. p. 34. - Ascomatibus superficialibus, planis v. leniter convexis, rotundatis dein confluentibus, immarginatis, carneis, dein obscurioribus; sporidiis oblongis, hyalinis, simplicibus, uniseptatis,  $11-15 \approx 3.5-5.5$ .

Hab. in thallo Peltigerae caninae, Massachusetts (WILLEY) et California (FARLOW). - Incertum est an haec species potins quam Discomycete gen. Nectriae spectet et tunc cum N. lecanode (Ces.) comparanda.

LINHARTIA Sace. et Syd. — Syll. XVI p. 744, XVIII p. 95, XXII p. 692.

 Linhartia philippinensis Rehm, Ascomyc. Philipp. V, Leaflets of Phi- 7275 lipp. Botany, VI (1914) p. 2236.— Ascomatibus sparsis, sessilibus, in maculis epiphyllis discretis albidulis, ex hyphis gelatinosis conglutinatis, gonidia viridula includentibus contextis innatis, globosoclausis, dein urceolatis, fuscis, glabris, 0,2-0,3 mm. latis, siccis involutis; aseis clavatis, apice rotundatis, sessilibus, 30 × 15, octosporis, J.; paraphysibus filiformibus hyalinis epithecium fuscum formantibus; sporidiis distichis, ellipsoideis, rectis, medio septatis, non constrictis, hyalinis, 10 × 3-3,5.

Hab. ad Ficum ulmifolium, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (J. J. Mirasol). — Pertinet potius ad Lichenes.

2. Linhartia luzonica Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 7276 Botany, VI (1914) p. 2236. - Ascomatibus epiphyllis, in medio macularum discoidearum 2-4 mm. lat. albarum sitis, prosenchymatice e cellulis 4-5 \( \mu\) latis et gonidia viridula includentibus contextarum primitus globosis fere singulari-innatis, dein urceolatis, fuscis, disco hyalino albidulo-marginato, 150 µ diam.; ascis ovoideis, octosporis, 60 × 30, filiformi paraphysatis; sporidiis oblongis, rectis, utrinque rotundatis, medio septatis, non constrictis, 35-60 (?) µ, hyalinis.

Hab. in foliis Symphorematis luzonici, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES). — Ad Lichenes per-

tinebit. An Biatorinopsis?.

3. Linhartia Soroceae Rehm in Rick, Fungi austro-amer, fasc. XI-XVIII 727 n. 320, Ann. Mycol. IX, 1911, p. 181 (nomen nudum). Hab. in Sorocea ilicifolia, America austr.

BELONIELLA Sacc. Syll. XIV p. 786, XVI p. 1149, XXII p. 693. Genus aptius ad species hyalodidymas restrictum. - Syn. Dibelonis F. E. Clements, Genera of Fungi 1909, p. 86, 175, Eubelonis F. E. Olements, l. c. p. 87, 175.

1. Beloniella Hemerocallidis Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 7278 p. 181. - Ascomatibus sparsis, initio immersis et globoso-clausis, dein erumpentibus, disco urceolato, tenuiter marginato, demum applanato, pallide griseis, sessilibus, extus glabris, brunneis, 0,3-0,5 mm. latis, siccis nigrescentibus; contextu parenchymatico brunneo; ascis clavatis, apice rotundatis, octosporis, 60 \* 5-6; sporidiis distichis, oblongis, rotundatis, 2-locularibus, hyalinis, 6-8 \* 2; paraphysibus filiformibus 2 μ, sursum 3 μ crassis, hyalinis.

Hab. in foliis putrescentibus Hemerocallidis fulvae, Königstein ad Elbe, in Germania. - Ob minuties sporidiorum facile distinguenda.

2. Beloniella Hydrocharidis Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 7279 p. 181. - Ascomatibus plerumque sparsis, initio immersis, dein erumpentibus, disco urceolato, pallido, tenuiter albido-marginatis, extus brunneis, 0,2.0,25 mm. diam., siceis involutis, atris, punctiformibus; contextu parenchymatico, brunneo, prope marginem cellulis elongatis praedito; ascis clavatis, 45-60 × 6-7, plerumque 4sporis, paraphysibus filiformibus, hyalinis, 1,5 µ cr. obvallatis; sporidiis monostichis, oblongo-ellipsoideis, rotundatis, initio continuis, grosse 2-guttulatis, dein bilocularibus, hyalinis, 10-12 \* 3.

Hab. in caulibus emortuis Hydrocharidis Morsusranae, prope Windsheim in Franconia.

3. Beloniella Fairmani (Rehm) Saccardo, Belonium Fairmani Rehm, 7280 Ann. Mycol. IX, 1911, p. 367. - Apotheciis dispersis, sessilibus, globulosis, dein patellaribus, haud distincte marginatis, disco plano v. subconvexulo, flavido-hyalinis v. cinerascentibus, 0,1-0,2 mm. diam., extus glabris excipulo tenuissime parenchymatico brunneolo, ceraceis, siccis fuscidulis, hand contortis; ascis clavatis, apice rotundatis, 60-70 × 10-15, octosporis, J. ope-; sporis oblongis v. subclavatis, utrinque obtusis, rectis v. subcurvatis, medio septatis, hyalinis, 9-10 \* 4-5, distichis; paraphysibus filiformibus septatis,

3 μ cr. apice flavidulis; epithecium formantibus, hypothecio hyalino. Hab. in ligno putrido, Lyndonwille N. J., America bor. (FATR-MAN).— Valde Agyrium appropinquat, excipulo distincte usque ad marginem disci formato carens.

#### Sect. 4. Hyalophragmiae

BELONIDIUM Mont. et Dur. — Syll. VIII p. 496, X p. 27, XI p. 417, XIV p. 786, XVI p. 749, XVIII p. 103, XXII p. 694.

1. Belonidium Macounii Dearness, Mycologia, 8., 1916, p. 98.— Asco-7281 matibus cyathiformibus v. urceolatis, sessilibus, atro-brunneis, 1-mm. diam., gregariis, interdum caespitosis; ascis cylindraceis hyalinis,  $90.96 \times 7$ ; paraphysibus ascum paullo superantibus, sursum inflatulis; sporidiis elongatis, hyalinis, 3-septatis,  $20.30 \times 3$ , pluriseriatis.

Hab. in ramis emortuis Spiraeae Menziesii, Vancouver Island, Columbiae (J. MACOUN).

2. Belonidium corticola Jaap, Ann. Mycol. 15., 1917, p. 102.— Asco-7282 matibus remotiuscule gregariis, sessilibus, globosis, mox dehiscentibus, scutellatis, pallide v. sordide flavidis, disco carneolo v. pallido, margine albido-pruinosis, crassiuscule ceraceis; contextu laxe parenchymatico, marginem versus prosenchymatico et in fibrillas 3-4  $\mu$  cr., hyalinas soluto; ascis longe clavatis obtuse tenuatis, 60-70  $\times$  7-8, octosporis; sporidiis tereti-fusoideis utrinque rotundatis, 12-18  $\times$  2,5-3, pluriguttulatis, dein 2-4-cellularibus, irregulariter distichis; paraphysibus filiformibus, sursum paullulo incrassatis, obtusis, hyalinis, ascos paullo superantibus.

Hab. in caulibus putridis Cirsii spinosissimi, Furka, Helvetia.— Affine Bel. pruinifero sed sporidiis multo minoribus etc. distinctum.

Belonidium Uredo Rehm. — Syll. VIII p. 329, XVI p. 752 — var. 7283
 Kriegerii Rehm, Ber. Bayer. Bot. Gesellsch. XIV (1914) p. 104. —
 Ascomatibus 0,5·1,5 mm. latis, disco albo-lacteo, sieco convoluto, brunneolo; sporidiis fusoideis, 1-dein 4-locularibus, 15 × 2,5; paraphysibus sursum ad 3 μ crassis.

Hab. in pagina inferiore foliorum dejectorum Vaccinii Vitis - Idaeae in Erzgebirge, Europa media.

MANILAEA Sydow, Ann. Mycol. XII, 1914, p. 569 (Etym. ob oppido Manila, cujus in vicina nascitur). — Ascomata sessilia, basi con-

tracta, mox plane cupulata usque patelliformia, marginata, extus glabra usque pruinosula, subceracea, basi hyphis paucis tenuibus cineta, contextu prosenchymatico, asci clavati usque saccati, octospori. Paraphyses tenues, hyalinae. sursum epithecium formantes. Sporidia pluriseptata hyalina. — A Belouidio aegre distinguendum.

1. Manilaea bambusina Sydow, I. c. fig. 5 .- Ascomatibus in partibus 728 matricis albido-coloratis effusis plus minus dense dispositis, superficialibus, primitus plane cupulatis, dein fere patelliformibus, 0,2-0.6 mm. diam. parte centrali matrici affixis, subceraceis, extus cinnabarinis, lateritio-cinnabarinis v. vinoso-cinnabarinis, disco plano primitus fere concolori dein pallidiore usque albido (praecipue in sicco), extus glabris v. tantum pruinosulis, contextu exteriore prosenchymatico brunneo, interiore ad basim minute parenchymatico hyalino, saepe ad basim hyphis rectis v. curvatis pallidis usque hyalinis tenuibus cinetis; ascis clavatis usque saccatis, basim versus attenuatis, ad apicem valde incrassatis, octosporis, 50-60 × 18-25; paraphysibus numerosis sursum ramosis et epithecium indistinctum grumosum primitus purpureum v. rubro-violaceum dein obscure brunneum formantibus; sporidiis distichis, rarius tristichis, obelavatis v. subfusoideis, hyalinis, 3-4-septatis (septis crassis) rectis vel inaequilateris, 20-24 \* 10-11, loculo superiore majore, membrana poro ratione crassa.

Hab. ad culmos emortuos Bambusae Blumeanae, prope Manila, Ins. Philippin. (M. RAMOS).

DAVINCIELLA Sacc.— Syll. XVIII (1906) p. 101, 102.— Est Davincia 7285 sessilis (Syn. Merodontis F. E. Clements, Genera of Fungi 1909, p. 87, 175).

BELONIUM Sacc. — Syll. VIII p. 492, X p. 26, XI p. 417, XIV p. 785, XVI p. 1149, XVIII p. 107, XXII p. 697.

1. Belonium branseanum Lindau, Hedw. LI (1912) p. 327. — Ascomatibus globosis dein apertis et hymenium disciforme denudantibus, extus subfurfuraceis, albidis vel subavellaneis, ca.  $^1/_4$  mm. diam.; ascis cylindraceis apice rotundatis, non incrassatis, usque ad  $35 \times 4$ , octosporis, paraphysibus filiformibus, simplicibus, 1  $\mu$  cr., hyalinis obvallatis; sporidiis distichis, clavatis, utrinque rotundatis, hyalinis, 3-septatis, 7,5 × 8-3. Jodi ope nulla.

Hab. in squamis rhizomatis Polypodii iboensis in silvis ad Ibogebirge, ins. Novae Guineae, alt. 1000 m. (R. Schlechter).

2. Belonium Spiraeae Naoumoff, Champ. Oural. I (1915) p. 26, t. II f. 7287 15 a-d. - Ascomatibus sparsis, sessilibus, primitus clausis, globosis, dein disco plano, tenuiter marginato, aperto, glabris, fuscis 250-300 µ diam.; contextu fere prosenchymatico; ascis clavatis apice rotundatis, 44 × 10, octosporis, paraphysatis; sporidiis ellipsoideis, primo 1., dein 3 septatis, 9-12 × 4,5-5, hyalinis, oblique monostichis; paraphysibus septatis, hyalinis; hymenio jodi ope com spicue coerulescente.

Hab. in ramulis Spiraeae mediae in silvis Sugomak, Perm, Ural, Rossia.

#### PODOBELONIUM Sace. — Syll. VIII p. 503, XVIII p. 106.

1. Podobelonium Hypnorum (Sydow) Saccardo, Belonioscypha Hypnorum 7288 Sydow, Ann. Mycol. 15., 1917, p. 147. - Ascomatibus solitariis, turbinatis, 0,4 mm. lat., 0,8-1 mm. altis, in sicco vix conspicuis in stipitem crassiusculum breve tenuatis, aquoso-carnosis, pallide roseolis, margine tenuiter fimbriato, contextu tenui, flavido, prosenchymatico; ascis clavatis apice rotundatis deorsum sensim in pedicellum brevem tenuatis, octosporis, 150-180 \* 15-20; paraphysibus ramosis, 2-3 μ cr., apice dilatatis (4-5 μ) et jodi ope intense coloratis; sporidiis distichis fusoideis v. clavulatis, apice rotundatis, 3-5-septatis, non constrictis, hyalinis, 30-36 × 6-9, primitus utrinque appendicula filiformia 10-12 µ long, decidua auctis.

Hab. in fronde Hypni cupressiform is ad truncos quercinos, pr. Brückenam, Germania (A. ADE).

#### TRICHOBELONIUM Sacc. - Syll. VIII p. 495, XVI p. 447, XVIII p. 99, XXII p. 701.

1. Trichobelonium Melioloides Rehm, Ascom. Philippin. VII, in Leafit. 7289 of Philipp. Bot. VIII, 1916, p. 2929. - Apothecia dispersa, plerumque singula, interdum bina, epiphylla, sessilia, primitus globuloso clausa, dein urceolata, 0,2-0,25 mm. lata, nigra, disco hyalino, excipulo membranaceo, parenchymatice nigrofusce contexto, scabriusculo, ad basim hyphis plurimis centrifugis, -2 mm. excurrentibus, 3 µ latis, simplicibus, rectis, septatis, fuscis coronata; ascis oblongo-clavatis, 120-130 > 20-24, apice rotundatis, crasse tunicatis, 8-sporis, J-; sporis cylindraceis, rectis, utrinque rotundatis transverse 7-septatis,  $40-50 \times 7-8$ , hyalinis, 2-3 stichis. Paraphyses nullae.

Hab. ad folia Gigantochloae scribnerianae,

Paete, Ins. Philipp. (C. F. BAKER). - Hand parasitans in mycelio Meliolae, etsi ad basim mycelio hypharum centrifugarum insidens.

# Sect. 5. Phaeodictyae

- CALOPEZIZA Syd., Enum. Philipp. Fungi II. in Philipp. Journ. of Sci. VIII (1913) p. 499. - Etym. calos, pulcher et Peziza. - Ascomata sessilia, primitus globoso-clausa dein patellaria, e mycelio tenui oriunda, orbicularia, superficialia, vivide colorata, ceracea, extus praecipue ad marginem pilosa, contextu parenchymatico. Asci ovatoglobosi usque saccati, 6-8-spori, aparaphysati. Sporidia muriformia, colorata. — Est quasi Dictyomollisia pilosa et phaeospora.
- 1. Calopeziza mirabilis Syd., loc. cit., fig. 5. Ascomatibus hypophyllis, saepe per totam folii superficiem vel per magnam ejus partem plus minus aequaliter distributis, e mycelio tenuissimo ex hyphis longis flexuosis flavidulis simplicibus vel raro parce breviterque ramosis, parcissime septatis, 4-6 µ latis composito oriundis, sessilibus, primo clausis, mox apertis et patellaribus, rotundatis, 0,3-1 mm. diam., vivide luteo-ochraceis, ceraceis, extus praecipue ad marginem pilis rectis vel subrectis, flavidis, asperulis, apice obtusis, 80-150 > 6-9 obsitis, disco concolore, contextu ad basim obscure fusco-olivaceo, grosse parenchymatico, e cellulis 15-22 u diam, composito, in centro et in parte superiore e cellulis multo minoribus composito; ascis remote stipatis, ovato-globosis, apice incrassatis et late rotundatis, brevissime crasseque stipitatis, 35-44 × 24-34, 6-8-sporis, rarius elongatis, subsaccatis et tune usque ad 65 µ longis, aparaphysatis; sporidiis 2-4-stichis, aut conglobatis, ellipsoideis vel ellipsoideooblongis, utrinque rotundatis, transverse 5-(rarissime 6-) septatis, ad septum medium constrictis, 22-26 × 11-12, obscure olivaceo-fuscis, cellulis omnibus vel fere omnibus longitudinaliter 1-septatis.

Hab. in foliis vivis Premnae odoratae, Luzon, ins. Philipp.

# Sect. 6. Scolecosporae

BELONIOPSIS Sacc. - Syll. VIII p. 351, XVI p. 752, XXII p. 703. 1. Beloniopsis excelsior (Karst.) Rehm. - Syll. XVI p. 752. - var. glyce-7291 riincola Rehm, Ber. Deut. Bot. Gesellsch. XIV (1914) p. 106. - Asco-

matibus minute parenchymaticis, brunneis, margine cellulis filiformibus ornatis; ascis clavatis, apice obtuse acuminatis, 100-110 × 12,

octosporis; sporidiis plerumque vermiformibus, curvatis, utrinque acutis primo 4-dein 16-locularibus, hyalinis, 36-50 × 3,5, parallele dispositis; paraphysibus filiformibus 1,5 µ, apice ad 3 µ crassis.

Hab. in culmis putrescentibus Glyceriae, in Saxonia et in Austria inferiore. - Sporidiis multilocularibus praecipue distincta.

ERINELLA Sacc. - Syll. VIII p. 507, X p. 30, XI p. 419, XIV p. 789, XVI p. 753, XVIII p. 113, XXII p. 705.

1. Erinella Hystrix Bubàk, III Beitr. Pilz. Montenegro in Botani 7292 kai Közlemények, 1915, p. (50). – Ascomatibus gregariis, cupuliformibus vel calyciformibus, 0,2-0,4 mm. altis (sine setis), 0,2-0,3 mm. latis, breve pedicellatis, primum clausis, dein apertis, extus setis copiosis, densis, erectis, rigidissimis, glaberrimis, rubro-brunneis, usque 0,6 mm. longis, basi 6.7 \( \mu \) latis, ibidemque arcuatis, multiseptatis, sursum sensim attenuatis, apice acutis et dilutiori. bus; ascis cylindraceis, 70-80 × 6-8, apice attenuato-rotundatis, octosporis, paraphysibus paucis, filiformibus, 1,5 µ latis obvallatis; sporidiis filiformibus, parallelis, 40-50 × 1,5, rectis, hyalinis, septatis.

Hab. ad caules emortuos Valerianae montanae, Durmitor: in loco dicto « Lokvice » (ca. 2400 m.), Montenegro.

2. Erinella heterotricha Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 7293 Cienc. Cordoba, t. 23., 1919, Extr. p. 149.— Cupulae laxissime gregariae, turbinatae, breviter crasseque pedicellatae e cremeo ochroleucae, extus villosulae, pilis omnibus asperulis, marginalibus crassioribus apice acuminatis, caeteris obtusis gracilioribus, disco concaviusculo isabellino; ascis elongato-subclavulatis, deorsum breviuscule attenuato-pedicellatis, 8-sporis, paraphysibus crassiusculis parum longioribus apice acuminatis obvallatis, 90 × 10-12; sporis filiformibus pauciseptatis hyalinis,  $95 \times 3$ .

Hab. ad corticem vetustam arboris cujusdam ignoti, Apiahy, Brasilia (J. Puiggari).

3. Erinella philippinensis Syd., Enum. Philipp. Fungi II, in Philipp. 7294 Journ. of Sci. VIII (1913) p. 500. — Ascomatibus sparsis vel subgregariis, sessilibus vel brevissime crasseque stipitatis, cupuliformibus, 1-1,5 mm. diam., margine integro, extus albido-ochraceis et pilis simplicibus, rugulosis, hyalinis vel subhyalinis, 35-50 × 3-4, furfuracee conspersis, disco plano vel concavo, levi, aureo-citrinulo; ascis cylindraceo-clavatis, 65-70 × 6-8, octosporis, paraphysibus ascos superantibus, 2-2,5 μ crassis, linearibus, apice vix attenua-

tis; sporidiis distichis, aciculari-fusoideis, 3 septatis, utrinque acutis, hyalinis,  $20-28 \times 2-2.5$ .

Hab. in cortice emortuo, Luzon, Prov. Nueva Vizcaya, ins. Philipp. (Mc Gregor). — E. cognatae Pat. proxima sed colore ascomatum et sporidiis minoribus distincta.

4. Erinella setulosa Sacc., Notae Mycol. XXIII p. 70 (Accad. Venetotrent. 1917).— Ascomatibus hypophyllis, perexiguis, in caespitulos numero 2-6 junctis, utricularibus, 170-200  $\mu$  diam., pallide cereis, carnosulis, vertice circulariter anguste apertis, ubique praesertim sursum setulosis, setulis cuspidatis 80-90  $\mu$  longis, basi 7-8  $\mu$  cr. dilute flavidis; excipulo celluloso e hyalino flavido; ascis tereticlavatis, brevissime stipitatis, apice rotundatis, 120  $\approx$  12, copiose filiformi-paraphysatis, octosporis; sporidiis parallele polystichis, bacillaribus, utrinque obtusulis, rectiusculis, fere longitudine asci, 3  $\mu$  cr., 5-7-septatis, non constrictis, minute obsoleteque guttulatis, hyalinis.

Hab. in foliis emortuis Bambusae blumeanae, Los Baños, Ins. Philipp. — Species pulchella, ut videtur, bene distincta.

# Fam. 12. Ascobolaceae Boud.

#### Sect. 1. Hyalosporae

THELEBOLUS Tode — Syll. VII p. 44, X p. 34, XI p. 422.

1. Thelebolus lignicola Lloyd, Mycol. Notes n. 52, Dec. 1917, p. 738, 7296 fig. 1103-1105.— Minutus, gelatinosus, pallidus, fere albus, 2-3 mm. alt., vertice dehiscens et peridiolum exiguum, album, 1 mm. diam., gelatinosum exerens; sporis hyalinis, 4-4,5 × 3,5, levibus, circ. 60-100 in quoque asco.

Hab. gregatim in lignis putridis pr. New York, Amer. bor. (S. H. BURNHAM).

**ASCOPHANUS** Boud. — Syll. VIII p. 528, X p. 32, XI p. 421, XIV p. 793, XVI p. 758, XVIII p. 116, XXII p. 706.

Ascophanus verrucosporus P. Weid. Graff, Mem. Torr. Bot. Cl. 17., 7297 1918, p. 58. — Ascomatibus gregariis vel sparsis, immarginatis, convexis, lenticularibus, glabris, sessilibus, badiis, minutis, 0,6-1 mm. diam., basi filamentis intricatis; ascis maximis, clavatis, apice rotundatis vel truncatis, operculatis, octosporis, 215-245 × 30;

sporidiis monostichis, ellipsoideis, minute verrucosis, 22,8 × 15, hyalinis; paraphysibus filiformibus, simplicibus, raro bifidis, septatis, miniatis, 258 \* 3,8.

Hab. ad terram udam umbrosam, Luzon, Prov. Rizal, Fort Me Kinley, Ins. Philipp. (MARY S. CLEMENS).

295

2. Ascophanus fluorescens Spegazzini, Rev. Chilena Hist. Nat. XXII, 7298 1918, p. 100, tab. XII fig. 8-13.— Pusillus, ex albo-hyalino glaucofluorescens, primo subgloboso-lenticularis dein patellaris, 0,50-0,75 mm. diam.; asci obovato-clavati brevissime pedicellati, paraphysibus apice leniter incrassatis curvulisque cincti, octospori; sporae ellipticae mediocres nudae laeves hyalinae, 15-16 × 10-11. Jodi ope nulla.

Rab. in fimo vaccino exsiccato et postea in camera humida culto, ex Chile (Rv. P. F. JAFFUEL).

3. Ascophanus fimicola Boedyn et v. Overeem, Hedw. 59., 1917 (1918), 7299 p. 310, t. II f. 5-7. - Ascomatibus 2 mm. usque latis, initio globosis clausis, mox circulariter dehiscentibus et discum orbicularem v. ellipticum, tenuiter marginatum ostendentibus, denique alte convexis et immarginatis, glabris, extus saturate roseis; margini initio denticulato albido, dein evanescenti; ascis 180-200 × 20-30, octosporis, clavatis, obtuse rotundatis operculatis; sporidiis obtuse ellipsoideis 24-25 × 14-15, initio monostichis dein distichis, eguttatis, strato mucoso 3-4 µ crasso obvolutis; paraphysibus ascos aequantibus, septatis, sursum inflatis ibique e carotina soluta aurantiorubris, nec non crystalla acicularia rubra carotinica continentibus.

Hab. in fimo vaccino, pr. Fort Uitermeer pr. Weesp, Neerlandia.— Ob paraphyses crystalla carotinae amoene rubra (an normaliter) continentes distincta species. Asci (non exsilientes observati!) jodi ope immutati.

4. Ascophanus appendiculatus Alfr. Schmidt, Copr. Pilz. Schles., Bresl. 7300 1912 p. 30. - Ascomatibus flavido-brunneis, vetustis rufobrunneis, piriformibus, distincte marginatis, 0,5-1,4 mm. diam., 430-480 µ altis, disco plano v. convexo; contextus ex cellulis subrotandis flavidis formato; ascis teretibus v. tereti-clavatis, sensim stipitatis,  $210-250 \times 15-17$ , p. sporif.  $105-150 \mu$  longa, supra discum usque ad 50 m extantibus, octosporis, jodo vix tinctis; sporidiis oblique 1stichis, ellipsoideis, levibus, continuis, hyalinis, 17-19 × 8,5-9,5, utrinque papilla minutissima 1-2 µ auctis, atque muco obvolutis; paraphysibus simplicibus v. ramosis, flavidulis, septatis sursum paullo crassioribus, 5 µ cr.

Hab. in fimo equino, pr. Oswitz, Silesiae.

#### CUBONIA Sacc. - Syll. VIII p. 527, XIV p. 792, XXII p. 708.

1. Cubonia bulbifera Hobson, Proc. Amer. Acad. 1912 p. 242, tab. 1 fig. 1-28. — Sparsa v. gregaria, saepe conferta, sessilis v. in basim stipitiformem tenuata, turbinata, 3-10 mm. diam.; disco cupulato v. hypocrateriformi, pallide fulvo, initio plano dein, senio, cerebriformi-corrugato, extus saturatiore, denique toto atrato, glabro v. grumoso, margine irregulariter dentato-lacero; contextu subgelatinoso, excipulo parenchymatico ex cellulis 20-25 μ diam. nigricantibus; ascis clavatis, apice rotundatis, jodi ope immutatis, 125 × 15; sporidiis 8, uniseriatis, levibus, sphaericis, 12 μ diam.; paraphysibus tenuibus, sursum vix incrassatis. Mycelium bulbillos nigros, 75-100, ex cellulis subrotundis 20 μ diam. conflatis gerit.

Hab. in excremento canino ex Jamaica, Paesto Italiae, Guatemala, California, etiam in excremento suino, Guatemala (THAXTER, HOBSON).

## LASIOBOLUS Sace. - Syll. VIII p. 536, XIV p. 792, XVIII p. 117.

1. Lasiobolus oligotrichus A. L. Smith, Trans. Br. Mycol. Soc. V (1916) 7002 p. 238. — Ascomatibus gregariis, sessilibus, conicis, levibus, aurantiacis, primum clausis dein irregulariter apertis, extus cellulis irregularibus compositis, 280-300 μ longis, 100-210 μ crassis, extus pilis plerumque perpaucis simplicibus, non septatis, rectis, acutis, hyalinis, 85-95 × 5, obsitis; ascis paucis, subcylindraceis, sursum rotundatis, fere sessilibus, 90-140 × 18-30, jodo non coerulescentibus; paraphysibus gracillimis, numerosis, ad 150 × 2,5, vacuolatis, hyalinis, rarissime septatis vel ramosis, apice haud dilatatis; sporidiis ellipsoideis, 20 × 12, hyalinis.

Hab. in stercore Cuniculorum, Epping Forest, Britannia.— L. equino affinis sed eximie distinctus.

2. Lasiobolus macrotrichus Rea, Trans. Br. Mycol. Soc. V (1917) p. 440, 7303 t. VIII. — Ascomatibus minutis, 0,5-1 mm. latis, sessilibus, fulvis v. fulvo aurantiis, primo obconicis dein expansis, extus pilis longissimis, rigidis, rectis, acutis, continuis, ad basim incrassatis, 850-950 × 16-18, tunica 5 μ crassa, albis vestitis, margine nudo, disco saturatiori; ascis cylindraceis deorsum tenuatis, 180-195 × 15-16, operculatis, S-sporis, jodo haud tinctis; sporidiis ellipsoideis, hyalinis, 20-22 × 9-10, levibus; paraphysibus simplicibus v. ramosis, apice non incrassatis, septatis, hyalinis, 185-200 × 4-5.

Hab. ad stercorem Cervi Elaphi, in silvis prope Horner, Somerset Britanniae (N. G. HADDEN). — Lasiob. equino affinis sed pilis longissimis mox distinctus.

#### Sect. 2. Phaeosporae

7301

**ASCOBOLUS** Pers. — Syll. VIII p. 514, X p. 31, XI p. 420, XIV p. 793, XVI p. 760 et 1149, XVIII p. 118, XXII p. 709.

1. Ascobolus magnificus B. O. Dodge, Mycologia, IV, 1912, p. 218, t. 7304 72-73.— Ascomatibus sparsis v. confertis sessilibus primo globosis clausis albis v. albidis poro dehiscentibus margine involuto, demum profunde cupuliformibus, extus pruinosis ex hyphulis tenuissimis demum brunneolis, postremo valde expansis et discum flavo-viridulum ostendentibus 0,5-2,7 cm. diam.; ascis tereti clavatis 200-300 × 18-25. J tinctis, octosporis, paraphysibus lineari-clavulatis viridulo-granulosis 5-7 μ crass.; sporidiis ellipsoideis primo hyalinis dein pallide lilacinis demum roseo-violaceis levibus, 1 latere linea obliqua signatis, irregulariter distichis, 20-25 × 12-14.

Hab. in fimo equino ex cultura in laboratorio, New York, Amer. bor. — Quoad germinationem et foecundationem enfr. l. c.

2. Ascobolus Carletoni Boud. in Trans. Brit. Mycolog. Soc. IV, pt. I, 7305 1912, p. 62, tab. 2 fig. 1 (1913) — Ascomatibus minutissimis, 0,5-1 mm. latis, omnino albis, sessilibus sed parte infossa turbinatis, dimidia parte supera glabris, non marginatis, inferne furfuraceis; ascis clavatis, octosporis, 160-220 × 18-20; paraphysibus simplicibus vel divisis, apice irregulariter incrassatis, hyalinis; sporidiis ellipsoideis, primo hyalinis dein violaceis, levibus, 15-16 μ longis, denique episporio diffracto verruculosis et tunc pallidioribus crassioribusque, 16-20 × 10-11.

Hab. in stercore Tetraonis urogalli, in Scotia (C. Rea).

3. Ascobolus subglobosus Seaver, Mycologia, VIII, 1916, p. 96 t. 184 7306 f. 5-6.— Ascomatibus gregariis v. confertis, initio subglobosis, demum discoideis, 3-5 mm. diam., extus glabris, viridulo-flavis; disco plano, convexo v. irregulari, initio concolore, dein asperulo ob ascos et nigricante; ascis subcylindricis v. clavatis, demum tenuato-stipitatis, S-sporis; sporidiis 1-seriatis, dein partim distichis v. inordinatis, initio hyalinis, 1-guttatis minuteque pluriguttulatis, e violaceo nigricantibus, areolato-reticulatis, venis depressis; paraphysibus sursum vix incrassatis, contentu flavo-aureo.

Hab. ad terram udam in silvis et ad marginem stagni pr. Yonkers, New York, Amer. bor.

- 4. Ascoholus albinus Seaver, Mycologia, VIII, 1916, p. 95.— Ascomatibus gregariis initio subglobosis dein scutellatis, 4-5 mm. diam., extus albis, minute rugosis; disco plano v. subplano ex albido atrato (ob sporidia); ascis subcylindricis 8-sporis,  $200 \times 25$ ; sporidiis oblique 1-septatis, dein 2-seriatis v. congestis, ellipsoideis, e purpureo brunneis,  $20\text{-}26 \times 12\text{-minute rugulosis}$ ; paraphysibus tenuibus, hyalinis.
- 5. Ascobolus Demangei Pat., Bull. Soc. Mycol. de Fr. 1913 p. 222.—
  Receptaculo sessili, cupuliformi dein plano demunque convexo, 2-8
  mm. diam., orbiculari v. sinuoso, glaberrimo, flavo, dein intense viridi flavo marginato; ascis clavatis 150 × 8, operculatis, apice ro-

Hab, in uliginosis silvaticis pr. Yonkers, New York, Amer. bor.

tundatis v. truncatis octosporis; paraphysibus linearibus, guttulatis, apice parum incrassatis, muco flavo-virescenti immersis; sporis ellipsoideis, 20-22 × 10-11, utrinque obtuse rotundatis, non fusoideis, hyalinis, dein brunneo-violaceis demum obscure violaceis, interruptesed distincte striatis, striis angustis confertis.

Hab. solitarius v. arcte gregarius ad terram, La Pho Tonkin Asiae (Demange). — A. viridi proximum sed differt receptaculis

majoribus et forma magnitudineque sporarum.

6. Ascobolus geophilus Seaver, Mycologia, VIII, 1916, p. 96 t. 184 7809 fig. 1-2. — Ascomatibus sparsis v. gregariis, initio subglobosis demum e discoideo scutellatis, 5 mm. diam., extus viridulo-flavis, e furfuraceo glabratis; disco plano v. subconcavo, concolore, ex ascis exsilientibus ruguloso et saturatiore, demum nigricante; ascis clavatis deorsum sensim tenuato-stipitatis, 200·250 × 15·18, octosporis, rarius tetrasporis; sporidiis monostichis dein distichis v. inordinatis, ellipsoideis, hyalinis dein violaceis, demum brunneis, 22-25 × 12·13, rugulosis, reticulatisque; paraphysibus tenuissimis, parce ramulosis, 2 μ cr. sursum paullulo incrassatis, contentu aureo-flavo.

Hab. ad terram udam, New York usque ad Jowa et in Europa (teste Auct. I. c.).

7. Ascobolus parasiticus Van der Wolk, Mycol. Centrlbl. IV (1914) p. 7310 236, c. ic.— Ascomatibus discoideis, olivaceo-viridulis, 3 mm. circ. diam.; ascis cylindráceis, paraphysibus filiformibus, apice saepe ramosis, septulatis, ascos superantibus; sporidiis late ellipsoideis, brunneis, verrucis crassis obscurioribus irregulariter exornatis, 28 \* 20 (ex ic.).— Teste Auctore adsunt status conidicus (Rhizostilbella

rubra) et sclerotialis (Sclerotium omnivorum) quae confer.

307

Hab. in fructibus Voan dzeiae subterraneae, Bujtenzorg, Java.

8. Ascobolus Boudieri Lorton, Bull. Soc. Mycol. Fr. 1914, p. 223, t. XII 7311 fig. II. - Sparsus, sessilis vel turbinatus, primum leniter concavus, demum applanatus 2-3 mm. latus, marginatus, luteus vel luteovirens, extus fulvo-furfuraceus, tomentoque albo brevi matrici adfixus; hymenio luteo, demum brunneolo, nigro-punctato, margineque glabro; ascis cylindraceo-clavatis, octosporis, gelatinâ luteo-virente obvolutis, breviter attenuatis, 190-200 × 20; paraphysibus ad basim ramosis, septatis, 4.5 m latis, ad apicem tenuiter incrassatis; sporis ellipsoideis, elongatis, monostichis vel subdistichis, saepissime quatuor tantum coloratis et quatuor hyalinis, violaceis, dein violaceo-brunneolis, longitudinaliter striatis, 18 × 9; hyalinis vero ordinarie minoribus, nec striatis et saepe deformiter rotundatis.

Hab. in caulibus emortuis Amaranthi, Clessy, Gallia.

9. Ascobolus xylophilus Seaver, Mycologia, III, 1911, p. 61. - Asco- 7312 matibus gregariis sessilibus 1-2 mm. diam., oculo nudo nigricantibus sub vitro rufo-brunneis hymenio leviter concavo v. subplano, aseis maximis cylindraceis v. clavatis operculatis octosporis, 165-235 × 30-35; sporis monostichis v. partim distichis late ellipsoideis utrinque acutulis purpurascentibus levibus demum verruculosis,  $35.38 \times 13.15$ .

Hab, in lignis Coniferarum aeri diu expositis, Geneva, Creek Canyon, Colorado, Amer. bor. — Ab Asc. lignatili et denudato, pinicolis, distinctus.

10. Ascobolus nitidus Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7313 1920 (1921), p. 153. — Discoideus 0,3 mm. diam. e stipite angusto subaequilongo oriens, leniter ochraceo-virescens, ceraceus, extus levis; ascis prominentibus piriformibus octosporis; sporidiis irregulariter confertis, oblongis, nigro-fuligineis, levibus, uniseptatis,  $10 \approx 6.$ 

Hab. in Poria putrescenti, Cascades Hobart, Tasmania.

SACCOBOLUS Boud. - Syll. VIII p. 524, X p. 31, XVI p. 761, XVIII p. 120.

1. Saccobolus citrinus Boud, et Torr., Bull. Soc. Mycol. Fr. 1911, p. 131 7314 t. V f. I. - Minutissimus, mm. 0,2 ad 0,3 latus, luteus, glaber. Receptacula pulvinata, luteo-ochracea, sessilia; hymenio pulvinato. Paraphyses hyalinae, simplices aut divisae, septatae, ad apices

paululum incrassatae, gelino luteo ut thecae immersae. Thecae late clavatae, ad basim attenuatae, 130-150  $\mu$  longae, 30-35 latae. Sporae oblongo-fusiformes, aggregatae, 21-23  $\mu$  longae, 9-10 latae.

Hab. ad stercorem vaccinum, in Lusitania (TORREND).

## Fam. 13. Dermateaceae Fr.

#### Sect. 1. Hyalosporae

URNULA Fr.— Syll. VIII p. 548, XI p. 422, XVI p. 762, XVIII p. 21.

1. Urnula Torrendi Boud., Bull. Soc. Mycol. Fr. 1911, p. 129, t. V f. I. — 7315 Minor, 1-1 ½ cm. alta, 1 cm. lata, tota nigra, breviter et crasse stipitata. Receptaculum extus vix tomentosum, rugulosum, margine breviter denticulato; hymenio atro, laeve. Pediculus inverse conicus, ad basim nigro-fibrillosus et mycelio concolore enatus. Caro cupulae et pediculi etiam atra. Paraphyses dichotomice ramosae, fuliginosae, septatae, ad apices incrassatae. Thecae maximae, operculatae, octosporae, cylindricae, sed ad basim longe attenuatae et more generis flexuosae, 450-470 μ longae, 16-18 μ latae. Sporae majores oblongae, albae, intus guttulis majoribus, aequalibus, non oleosis omnino repletae, 30-33 μ longae, 14-15 μ crassae.

Hab. ad ramulos et fructus putridos E u c a l y p t o r u m, Lisbonne, Lusitania.— var. madeirensis Torrend in Broteria, ser. Bot. IX (1913) p. 173, fig. 7.— A typo differt pediculo ad basim glabro vel vix pubescente, non fibrilloso, ascis paullo minoribus, 400-500 × 10-12 et sporidiis etiam minoribus, 16-20 × 8-10.

Hab. in ins. Madeira. — An species distincta? — Habitu Pseudoplectaniae nigrellae Pers. similis, sed sporidiis ovalibus non huius generis.

2. Urnula lusitanica Boud. et Torr., Bull. Soc. Mycol. Fr. 1911, p. 130, 7316 t. V f. II. — Minuta, gracilis, longe stipitata, 1 cm. ad 1 cm. ½ alta, 4-7 mm. lata, tota atra, extus subtomentosa ad basim mycelio atro enata. Receptacula longe stipitata, extus tomento nigro adpresso tecta, et saepius vermiculatim impressa; hymenio cupulare atro. Paraphyses elongatae, vix septatae, fuliginosae, ramosae, ad extremitates non incrassatae intus nebulosae. Thecae jodo non tinetae, octosporae, cylindricae sed ad basim longe attenuatae et flexuosae, 280-300 μ longae, 13-15 μ latae. Sporae hyalinae, ovoideae, laeves, intus multigranulosae vacuolâ centrali saepe indistinctâ donatae, 20-25 μ longae, 10-13 μ latae.

Hab. ad ramulos dejectos putridos, Lisbonne, Lusitania.

3. Urnula Philippinarum Rehm, Ascomyc. Philipp. VI, Leaflets of Phi-7317 lipp. Bot. VI (1914) p. 2281.— Ascomatibus primo urceolatis, dein campanuliformibus, late expansis, ad basim contractis, non stipitatis, disco circulari, crasse integre marginato, 5 cm. usque lato, nigris, excipulo demum transverse corrugato, fuscidulo, tomento flocculoso ex hyphis simplicibus, rectis, septatis, fuscis, 400 μ usque longis, 5-7 μ latis dense obtecto; ascis cylindraceis, apice rotundatis, octosporis, 200-250 × 20; paraphysibus filiformibus, septatis, 3 μ, ad apicem 8-10 μ crassis, fuscis; sporidiis monostichis, ellipsoideis, utrinque subacutatis, continuis, plerumque guttulatis, interdum 1-2-magniguttatis, hyalinis, levibus, 25-30 × 12-15.

Hab. ad ligna emortua, Los Baños, ins. Philipp (C. F. BAKER).—. E subg. Rhizopodella.

**DERMATEA** Fr.— Syll. VIII p. 550, XI p. 422, XIV p. 794, XVI p. 762, XVIII p. 122, XXII p. 711.

Dermatea carnea C. et R.— Sacc., Syll.VIII p. 555—f. seriata Rehm, 7318
 Ascomyc. exsicc. fasc. 47 n. 1901; Ann. Mycol. IX, 1911, p. 1.—
 A typo differt apotheciis breviter seriatis nec caespitosis.

Hab. in cortice Aceris nigri, London Ontario, Canada, Amer. bor. (J. DEARNESS).

2. Dermatea Mori Peck in N. Y. State Mus. Bull. 157 (1911) p. 46 et 7319 109 (1912). — Ascomatibus orbicularibus, ellipsoideis vel leviter irregularibus, 1-2 mm. latis, late convexis vel discoideis, erumpentibus, epidermide rupta cinctis, nigris vel brunneo-nigris; ascis cylindraceis vel subclavatis, 60-90 ≈ 20-25; sporidiis oblongis v. subcylindraceis, subdistichis, continuis, hyalinis, 20-30 ≈ 8-10.

Hab. in ramulis emortuis Mori albae tataricae, Concordia, Kansas, Amer. bor. — Colore ascomatum gen. Cenangii proxima sed structura Dermateae.

3. Dermatea palmicola Patouill., Bull. Soc. Mycol. de Fr. 1912, p. 35, 7320 fig. 4.— Caespitosa cupuliformi, basi in stipitem brevissimum attenuata, coriaceo-membranosa, cupulis 3-5 mm. diam., flavis v. rubris, plicato-rugosis, minute furfuraceis, disco plano v. concavo obscure castaneo praeditis; ascis cylindricis, 45-50 × 6, octosporis; paraphysibus linearibus; sporis hyalinis cylindraceis, utrinque obtusis, biguttulatis, 6 × 2.

Hab. ad truncos Palmarum, Camayenne, Guinea gallica (DU-PORT). — Derm. heteromerae Mtg. proxima sed minori et tenuiori.

4. Dermatea mycophaga Massee, Bull. Bot. Garden Kew 1908, p. 218. — 73 Ascomatibus subsessilibus, carnosis, aggregatis, mox applanatis, disco ferrugineo extus glabrato, obscuro, 0,5 mm. diam.; sporidiis oblique monostichis, ellipsoideis, hyalinis, glabris, eguttulatis, 5 \* 3; paraphysibus filiformibus sursum ramosis brunneis.

Hab. in stromate vetusto X y l a r i a e, Straits Settlements (RIDLEY). — Dense gregaria, habitat peculiari notabilis.

5. Dermatea nodulariformis Rea, Trans. Brit. Mycol. Soc. V (1916) p. 732: 256, tab. IV. — Ascomatibus solitariis vel parce cubcaespitosis, 8-10 mm. altis, 5-8 mm. latis, colore intense melleo vel succineo, turbinatis vel obconicis, nidulariformibus, sessilibus, basi attenuatis, humidis ceraceo-gelatinosis, demum cartilagineis, extus leviter furfuraceis; ascis cylindraceis, basi sensim attenuatis, 260-300 × 12-15, octosporis, jodo operculo immarginato coeruleo-tinctis; sporidis monostichis, ellipsoideis, hyalinis, 14-17 × 9-10, diu levibus demum verrucosis; paraphysibus ascos excedentibus, 270-315 × 3-4, septatis, apice leniter incrassatis et granuloso-farctis.

Hab. ad ligna et ramos decorticatos, Monsaldale, Derbyshire, Britannia.

CENANGIUM Fr.— Syll. VIII p. 556, X p. 36, XI p. 423, XIV p. 795, XVI p. 763, XVIII p. 125, XXII p. 713.

1. Cenangium peckianum Rehm, Ann. Mycol. XIII, 1915, p. 3.— Ell. 7323 et Ev., N. am. f. 3042 (sub Tympanis Nemopanthis Peck). — Apothecia in stromate subcorticali ellipsoideo, 2-3 mm. lato, crasso, extus nigro, per corticem transverse fissum prorumpente 10-20 arcte congregata, sessilia, primitus globosa, dein patellaria, disco orbiculari, tenuiter marginato, atra, 0,2 mm. diam., glabra, excipulo pseudoparenchymatice ex cellulis -5 μ latis contexto, fusco; asciclavati, apice rotundati, 70-75 × 10-12, 8-spori. Porus J dilute +. Sporae ellipsoideae, rectae, 1-cellulares, hyalinae, 10 × 3, distichae; paraphyses filiformes, apice 3-5 μ latae, subfuscae, epithecium formantes. Hypothecium hyalinum.

Hab. ad ramulos emortuos Nemopanthis canadensis, Munith Mich., America bor. (HICKS).

2. Cenangium Strasseri Rehm, Ann. Mycol. XIII, 1915, p. 1. — Apo- 7324 thecia gregaria, cortici primitus globoso-clauso innata, eum protuberantia, dein laciniatim perrumpentia, excipulo proprio, extus albide farinaceo, demum in laciniis 4-6 disrupto, discum planum, orbicularem, violaceo-nigrum, 1-2 mm. latum denudantia, crasse

fusca; asci clavati, apice rotundati, -150  $\times$  15-18, 8-spori, J-; sporae oblongo-ellipsoideae, utrinque obtusae, rectae, 1-cellulares, 2-guttulatae, hyalinae 18-20  $\times$  8-9, 1-2 stichae; paraphyses filiformes, septatae, 1,5  $\mu$ -versus apicem -8  $\mu$  latae ibique violaceo-fuscae epithecium crassum formantes; hypothecium dilute fuscidulum.

Hab. ad corticem Pyri Mali, Sonntagberg, Austriae inf. (STRASSER).

Cenangium? clandestinum Rehm. — Sacc., Syll. VIII p. 557 — var. 7325
 major Rehm, Ann. Mycol. X, 1912, p. 389. — A typo differt ascomatibus multo majoribus (0,5-1 cm. lat.), inordinatis, ascis cylindraceis (90 × 9) etc.

Hab. ad ramulos Aceris? campestris, prope Mährisch-Weisskirchen, Moravia (PETRAK).

4. Cenangium Berberidis Rehm, Ann. Mycol. X, 1912, p. 389.— Asco-7326 matibus dispersis, primitus innatis, dein in ligno dealbato sessilibus, crebre initio globoso-clausis, mox urceolatis, dein disco orbiculari explanato, 0,5-2 mm. diam., fuscis, extus glabris, parenchymatice fusce contextis, versus marginem cellularum seriebus dirreptis, inde in sicco subfimbriatulis, siccis vario modo complicatis et versus basim coarctatis, ceraceis; ascis clavatis, apice rotundatis, 60-65 × 7-8, octosporis, J +; sporis oblongis, rectis v. subcurvatis, 1-cellularibus, utroque apice 1-guttatis, hyalinis, 10 × 3, distichis; paraphysibus filiformibus, hyalinis, -3 μ cr., ad apicem interdum dilute fuscescentibus.

Hab. ad ramulum Berberidis, Birgsan alpium Algoviae (ADE). — C. ligni et O. caespitosi proximum sed differt praecipue ascomatibus solitariis nec caespitosis.

5. Cenangium Hippophaës Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 7327 p. 184. — Ascomatibus caespitosis, cortice interiore atrato initio nidulantibus et clausis, dein corticem laciniatim disrumpentibus erumpentibusque, urceolatis, disco plerumque curvulo, rotundato, pallido, brunneolo-marginato, extus flavis demum brunneis, 1-1,5 mm. latis; contextu parenchymatico, ad marginem celtulis rectis, septatis, 30 40 × 4 ornato, siccis incurvis et brunneis; aseis clavatis, sursum rotundatis, 55-60 × 7-8, octosporis; sporidiis distichis, rectis, continuis, minute biguttulatis, hyalinis, 10 × 3; paraphysibus filiformibus, obtusis, 3 μ cr., hyalinis.

Hab. in ramulis Hippophaës rhamnoidis, prope Warnemünde, Mechlenburg, Germaniae.

6. Cenangium Umbellatarum (Ces.) Sacc. - Syll. VIII p. 564 - f. Cynan- 7328

200

chi Rehm in Ber. Bayer. Bot. Ges. XIII (1912) p. 175, sub *Pyrenopeziza*. — Ascomatibus sessilibus, extus brunneis; sporidiis oblongis, rectis, plerumque grosse 2-guttulatis in aseis clavatis,  $45 \times 8$ , distichis; paraphysibus filiformibus 1,5  $\mu$ , sursum ad 3  $\mu$  crassis et pallide flavo-brunneis.

- Hab. in caulibus siccis Cynanchi Vincetoxici, prope Landeck in Tirolia.

7. Cenangium Empetri A. L. Smith, Trans. Brit. Myc. Soc. IV, pt. I, 7329 1912, p. 76 (1913).— Ascomatibus sparsis, minutis, initio sub epidermide nidulantibus, dein erumpentibus, subturbinatis vel doliiformibus, margine connivente inde erecto, lacero, extus verticaliter striato-incrispatis, granulatis, atris, coriaceis, 300 μ latis et altis, hymenio nigrescente; ascis cylindraceo-clavatis crasse tunicatis, paraphysibus filiformibus interdum furcatis intermixtis, octosporis, 100 × 15; sporidiis ellipsoideis, griseo-fuligineis, 15-17 × 7-9.

Hab. in foliis dejectis Empetri nigri, in Britannia.

8. Cenangium alnicola Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 187.— 7330

Ascomatibus 5-20 in caespitulos dense confertis, cortice erumpentibus, initio globoso-clausis dein apertis, disco infundibuliformi sed mox scutelliformi, demum pluries contorto, flavido, margine leniter dentato, basim versus attenuatis, extus brunneo-flavis, 0,5-2 mm. latis; excipulo grosse celluloso-parenchymatico, brunneo, basi hyphis simplicibus, longis, 3-4 μ crassis brunneolis cineto, sicco incurvato margine albo-granuloso, disco atrato, extus scabro; ascis clavatis, apice rotundatis, octosporis, 40-45 × 5-6, paraphysibus filiformibus, hyalinis, 1,5 μ crassis; sporidiis distichis, oblongo-clavatis, obtusis, rectis, continuis, 2-guttulatis, hyalinis, 5-6 × 2-2,5.

Hab. in ramis siccis corticatis Alni, prope Grosshessellohe (München) in Bavaria. — Habitu C. rosulato proximo sed sporidiis omnino alienis.

9. Cenangium glaberrimum Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 7331 p. 187.—Ascomatibus solitariis vel parce caespitosis, initio clausis immersis dein per corticem erumpentibus, urceolato-apertis, disco applanato, brunneo, varie contorto, extus luteolis vel cinnamomeis, omnino glabris, immarginatis, 0,5·2,5 cm. latis, subcoriaceis; ascis clavatis, sursum rotundatis, 45-50 × 5-6, octosporis, paraphysibus filiformibus hyalinis obvallatis; sporidiis distichis, cylindraceis, plerumque leniter curvatis, rotundatis, continuis, hyalinis, 6·7 × 1,5.

Hab. in trunco emortuo Carpini Betuli, Mirabellgarten in Salzburg (MAGNUS). — A C. Carpini differt ascomatibus majo-

ribus et sporidiis contra minoribus.

- Cenangium acuum C. et Peck. Sacc., Syll. VIII p. 562 f. Strobi 7332
   Rehm, Ascomyc. Exsicc. fasc. 52 n.8226, Ann. Myc. XI, 1913, p. 171.
   Hab. in ramis Pini Strobi, prope Lake Huron Ont. Canada, Amer. bor. (J. Dearness).
- 11. Cenangium blumeanum Rehm, Ascom. Philippin. VII, in Leaflt. of 7333 Philipp. Bot. VIII, 1916, p. 2927. Apothecia dispersa, sessilia, primitus globoso-clausa, dein patellaria, disco tenuiter marginato plano, flavide rubescente, 1,5-2 mm. lato, versus basim subconstricta, non stipitata, excipulo glabro, parenchymatice fusce contexta, versus marginem pseudoprosenchymatico. Sicca complicata, involute crasse marginata, disco albido-pruinoso. Ascis clavatis, dein cylindraceis, apice rotundatis,  $40.45 \times 5-6$ , 8-sporis, J-. Sporis ellipsoideis, 1-cellularibus, biguttatis, demum 2-1-septatis, hyalinis,  $4.5 \times 2$ , 1-2-stichis. Paraphyses filiformes, dilute rubescentes, epithecium non formantes, 1,5  $\mu$  cr.

Hab. ad Bambusam blumeanam, Los Baños, Ins. Philipp. (M. B. RAIMUNDO).— Cenang. helvolum (Jungh.) Sacc. apotheciis stipitatis plane diversum.

12. Cenangium paraënse P. Henn., Hedw. vol. 48 (1908) p. 110.— A-7334 scomatibus caespitose erumpentibus, stipitatis, cupulatis, coriaceis, extus isabellinis, pruinosis, marginatis, 1-2 mm. diam., ad basim stipitiformiter productis, turbinatis, disco badio levi; ascis clavatis, apice subrotundatis, basi attenuato-stipitatis, octosporis, ca. 50 × 3-4, paraphysibus filiformibus 1,5 μ cr. obvallatis; sporidiis oblique monostichis vel subdistichis, oblongis, subcylindraceis, curvulis vel rectis, obtusis, continuis, hyalinis, 4-5 × 1,5-2.

Hab. in trunco emortuo, hort. bot. Goeldi, Parà, Brasilia (BAKER). — C. pulverulaceo affine.

13. Cenangium Abchaziae Rehm, Ann. Mycol. XI, 1913, p.398. — Apothecia, cortice dejecto arcte gregaria in ligno superficialiter denigrato sessilia, cyathoidea, c. 1 mm. alt., primitus clausa, mox urceolața, dein disco irregulariter tenuiter marginato -1 cm. explanata, extus glabra subfusca, disco obscuriore, sicca vario modo complicata, extus rugulosa, excipulo parenchymatice fuscidule contexto, coriaceo. Asci clavati, apice rotundați,  $40 \times 5$ -6, 8-spori. Sporae ovoideae, 1-cellulares, 2-guttatae, hyalinae, 6-7  $\times$  2,5, distichae. Paraphyses filiformes, 2  $\mu$  cr., hyalinae.

Hab. ad lignum putrescentem, Abchazia Fauces Petskii, Caucasiae (Woronow). — Cen. botryoso P. Henn. proximum.

TYMPANIS Tod. em. - Svil. VIII p. 578, X p. 36, XI p. 424, XIV p. 798, XVI p. 764, XVIII p. 127, XXII p. 714.

1. Tympanis Myricariae v. Höhnel et Rehm, Ber. Bayer. Bot. Ges. XIII 73: (1912) p. 204. - Ascomatibus sparsis, plerumque singulis, primitus immersis, globosis, clausis, dein per corticem laciniatum erumpentibus, discum scutellatum planum vix marginatum ostendentibus. atris, siccis extus albo-pulveraceis, 0,5-0,8 mm. diam.; excipulo crasso parenchymatico; ascis cylindraceis, sursum rotundatis, 120-150 × 10-12, myriosporis; sporidiis minutissimis, oblongis, rotundatis, leniter curvulis, 1 µ longis; paraphysibus filiformibus, sentatis, 2 µ crassis, apice brunneis.

Hab. in ramulis Myricariae germanicae, in Tirolia. In ascis nonnullis sporidia perpauca 5 µ crassa reperta sunt.

2. Tympanis Pinastri Tul., Rehm; Tympanis laricina (Fuck.) Sacc., Syll. 7337 VIII p. 583. - Saccardo, Notae Mycol. XX in Nuovo Giorn. bot. 23., 1916, p. 190.

Hab. in cortice emortuo Abietis balsameae, Mt. Morey N. Y. et Hardscrabble pond, Adirondack mts., N. York — Karstenio (Myc. Fenn. I p. 228) haerens, T. Pinastri Tul. ad Cenangellam Pinastri duxi (Syll. VIII, p. 588) quod erroneum. Dicatur Cenangella Pinastri (Karst., non Tul.) Sacc. et Tympanis pinastri Tul.

#### Sect. 2. Phaeosporae

PHAEANGIUM Sacc. Syll. VIII p. 592, X p. 37, XI p. 424, XIV p. 798, XVIII p. 128, XXII p. 715.

1. Phaeangium peckianum Sacc., Notae Myc. XX in Nuovo Giorn. bot. 7338 it. 23., 1916, p. 190. - Ascomatibus in caespitulos longitudinaliter oblongos, rimose erumpentes, 2 mm. longos congestis, coriaceis, obconicis, denique apertis, patellatis, totis nigris, nitidulis, numquam furfuraceis, 0,5-1 mm. diam., 8-12 in quoque caespitulo; ascis tereti-clavatis, deorsum breviter sensim tenuato stipitatis, 95-100 × 16-17, paraphysibus copiosis filiformibus apice non v. vix incrassatis, totis hyalinis obvallatis, octosporis; sporidiis distichis v. oblique monostichis, elliptico-oblongis utrinque leviter obtuseque tenuatis, 12-17 × 6-7, diu hyalinis, dein dilute brunneis, plasmate interdum bipartito.

Hab. in cortice subemortuo Aceris rubri, Sandlake, N. York. - A Phaeangio phaeosporo (Cooke) Sacc. et Syd., Syll. XVI p. 765, Cen. (Phaeangio) phaeosporo Cooke, Sacc., Syll. VIII p. 570,

praeceteris mox dignoscitur ascomate toto nigro, non furfuraceo, paraphysibus hyalinis etc.

HYMENOBOLUS Mont. - Syll. VIII p. 587, XXII p. 716.

Hymenobolus Agaves Dur. et Mont., Syll. VIII p. 587.— Saccardo 7339
 Notae Mycol. XXII (Atti Ac. Padova 1917) p. 162.

Hab. (Adde) in foliis emortuis v. morientibus Agaves americanae, Monteleone Calabro (Catanzaro), Italia merid. (Doct. D. SACCARDO).— Pulcherrima species algeriensis, in Italia nondum cognita.

#### Sect. 3. Didymosporae

CENANGELLA Sace. — Syll. VIII p. 587, X p. 37, XI p. 424, XIV p. 798, XVIII p. 127, XXII p. 716.

1. Cenangella Gliricidiae Rehm, Ascomyc. Philipp. VI, Leaflets of Phi-7340 lipp. Botany, VI (1914) p. 2279. — Ascomatibus gregariis, cortice innatis, prorumpentibus, cyathoideis, in stipitem crassum elongatis, primitus clausis dein ore rotundo tenuiter marginato apertis, discum hyalinum vix denudantibus, 1 mm. latis et altis, atris, scabriusculis, contextu parenchymatico fusco, crasso, siccis valde umbilicatis, verrucosulis; ascis clavatis, apice rotundatis, octosporis, 75-80 × 15, J-, paraphysibus filiformibus obvallatis; sporidiis distichis, oblongis, utrinque rotundatis, rectis, medio septatis, non constrictis, hyalinis, 18-20 × 6-7.

Hab. in Gliricidia sepium emortua, Los Baños, ins. Philipp. (C. F. Baker). — Aspectu Gibberae et primo obtutu difficiliter a Pyrenomycetibus distinguenda. An novi generis typus?

2. Cenangella pyrenocarpoidea Rehm, Ann. Mycol. X, 1912, p. 395.— 7841 Ascomatibus in epiphyllo gregariis, juvenilibus erumpentibus, dein sessilibus, urceolatis, disco crasse marginato, hyalino, extus nigrofuscis, glabris, excipulo crasso, parenchymatice contexto, 0,15-0,2 mm. alt. et lat., siccis contractis, margine exasperatis, nigris, pyrenocarpoideis; ascis oblongo-clavatis, apice rotundatis, crasse tunicatis, 60-65 × 12-14 (4-), 8-sporis; J-; sporis fusoideis, subacutatis, medio septatis, haud constrictis, flavidulo-hyalinis, 20-22 × 5, distichis; paraphysibus sparsis, septatis, hyalinis, 1,5 μ.

Hab. in folio ? Lauri, Africa.— Phaeang. sociae P. Henn. affinis. An potius Phaeangellae sp.?

3. Cenangella fusco-pallidula Rehm, Ber. Bayer. Bot. Gesellsch. XIII 7342

(1912) p. 191. — Ascomatibus plerumque solitariis in cortice interiore atrato primum nidulantibus dein eum laciniatim disrumpentibus erumpentibusque, initio globoso-clausis dein disco applanato expanso albo apertis, demum margine undulatis, 0,5-2 mm. latis, extus brunneolis, glabris; excipulo parenchymatico griseo; ascis clavatis, sursum rotundatis, ad  $100 \times 10$ -12, octosporis; sporidiis distichis, fusoideis, rectis vel leniter curvatis, 2-4 locularibus, ad septa non constrictis, hyalinis, 15-18 × 4; paraphysibus filiformibus, septatis, 2  $\mu$ , sursum ad 5  $\mu$  crassis et luteolis.

Hab. in ramis Salicis fragilis, prope Weismain in Franconia super.

4. Genangella tasmanica Rodway, Pap. a. Proc. R. Soc. Tasmania f. 734 Year 1920 (1921) p. 156. — Erumpens cartilaginea sessilis, convexoconcava, levi nigra; ascis cylindraceis octosporis, sporidiis monostichis ellipsoideis subacutis uniseptatis, levibus, crasse tunicatis maturis leniter purpureis 10-12 × 5; paraphysibus filiformibus supra plerumque ramosis.

Hab. in ligno emortuo, Tasmania.

PHAEANGELLA Sacc. — Syll. VIII p. 599, X p. 37, XI p. 424, XIV p. 798, XVIII p. 128.

1. Phaeangella Heveae Massee, Bull. Bot. Gard. Kew, 1912, p. 190.— 7344
Ascomatibus erumpenti-superficialibus, basi crassa substipitata, caespitosis vel seriatim dispositis, ex urceolato patellatis, coriaceis, sordide ochraceis, 1 mm. diam.; ascis elongato-clavatis, octosporis, 65 × 9-10, paraphysatis; sporis distichis, oblongo-ellipticis, utrinque rotundatis, uniseptatis, ad septa non constrictis, hyalinis, 11-12 × 6 (an demum coloratis?).

Hab. in cortice Heveae, South Nigeria (JOHNSON). — An Cenangellae sp.?

2. Phaeangella Empetri (Phill.) Boud.— Cfr. Crossl., Proc. Prov. Sc. Soc. 7345 Halifax, 1913, p. 251. — Ita vocandum est Pseudocenangium Smithianum Boud.— Syll. XXII, p. 753.— Sporidia 17-20 × 9-12, initio continua pluriguttulata hyalina, dein flavo-viridula, demum atroolivacea, 1-septata. Est Cenangium Empetri Phill., The Scott. Nat., Apr. 1891 p. 89.

#### Sect. 4. Phragmosporae

- SCLERODERRIS Fr. Syll. VIII p. 594, X p. 37, XI p. 425, XIV p. 799, XVI p. 765, XVIII p. 129, XXII p. 717.
- Scleroderris pinastri v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, 7346
   p. 248 (nomen nudum). Est status ascophorns Gelatinosporii pinastri (Moug.) v. Höhn. (enfr. Fragmente z. Mykol. n. 1014, in Sitzb. k. Ak. d. Wiss. Wien 1917 (=? Gel. abietinum Peck).
- 2. Scleroderris Vacciniorum Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 7347 192. Ascomatibus gregariis, initio immersis et clausis, dein per corticem laciniatum singulis vel binis erumpentibus, discum rotundatum, luteum, primitus crasse dein tenuiter marginatum ostendentibus, 1-3 mm. latis, excipulo parenchymatico, crassiusculo, brunneo, glabro, siccis longitudinaliter vel triangulariter involutis extusque scabris; ascis clavatis, sursum obtuse rotundatis, sessilibus, 65-70  $\times$  10-12, octosporis; sporidiis polystichis, acicularibus, sursum obtusis, deorsum acutiusculis, rectis, 5-septatis, non constrictis, hyalinis, 30  $\times$  2,5; paraphysibus filiformibus, septatis, 2  $\mu$ , apice ad 4  $\mu$  crassis, hyalinis; hypothecio hyalino.

Hab. in ramulis siccis V a c c i n i i u l i g i n o s i, prope Gersfeld Rhön, Germania (H. Sydow).

#### Sect. 5. Scolecosporae

GODRONIA Mont. — Syll. VIII p. 601, X p. 37, XI p. 425, XVIII p. 130.

Godronia urceolus (Alb. et Schw.) Karst.— Syll. VIII p. 601.— var. 7348
 conferta D. S. Hone, Minnesota Bot. St. P. I, v. IV, 1909, p. 111.—
 A typo recedit ascomatibus dense 1-20 caespitosis, demum stipitatis, sporis parum brevioribus, 40-55 × 0,5-1,5.

Hab. ad cortices ramulorum Pruni pumilae, Cook Minnesota, Amer. bor. (FREEMAN et BALLARD).

2. Godronia Betheli Seaver, Mycologia, III, 1911 p. 64.— Ascomatibus 7349 erumpentibus discretis v. aggregatis interdum numerosissimis et crustas plura centimetra extensas formantibus et ramos omnino obtegentibus, singulis globosis vertice apertis et margine irregulari cinctis 1 mm. circ. latis et altis, extus brunneolis et furfuraceis, hymenio maturitate exposito albido v. glauco; ascis clavatis octosporis, 130 × 7-8; sporidiis in asco fasciculatis subfiliformibus utrin-

que acute tenuatis,  $65-85 \times 3-4$ , demum 7-septatis et ad septa leniter constrictis hyalinis; paraphysibus copiosis filiformibus.

Hab. ad ramos Salicis sp., Tolland Colorado, Amer. bor.

DURANDIA Rehm, Ascomyc. exsicc. fasc. 52, n. 2027, et Ann. Mycol. 78, XI, 1913, p. 166 (non Boek. 1896). — Secundum v. Höhn., Ber. deutsch. bot. Ges. 36., 1918, p. 310, a Godronia vix diversum.

# Fam. 14. Bulgariaceae Fr.

#### Sect. 1. Hyalosporae

LEOTIA Hill. — Syll. VIII p. 609, XVIII p. 131, XXII p. 719.

1. Leotia japonica Yasuda in Lloyd, Lett. n. 65 (1917). — A Leotia 7351 atro-virenti differt statura elatiore, 5-7 cm. alt.; ascomate udo laete flavo, vix viridulo-tineto, sieco olivascente, 1-1.5 cm. cr.; stipite laete flavo, cylindrico compresso, 4,5-6,5 cm. longo, 3-4 mm. cr.; ascis 130-150 × 7-8; sporis fusoideis 18-22 × 5-7, oblique seriatis; paraphysibus ramosis, sursum incrassatis.

Hab. ad terram, in Japonia (JASUDA).

SARCOSOMA Casp. — Syll. X p. 42, XI p. 427, XIV p. 804, XVI p. 771, XVIII p. 132, XXII p. 719.

1. Sarcosoma novo-guineense Ramsbott. in Gibbs, Contr. Phytogeogr. 7332 Arfak Mount. p. 186 (1917). — Ascomatibus gelatinosis, brunneis, disco pallidiore, turbinatis, 8 cm. altis, 5 cm. latis, extus strigosohirsutis; setis simplicibus, septatis, castancis, 450-1200 × 10-17; ascis cylindraceo-clavatis, obtusis, 400 × 17-18, p. sporif. 250 μ longa, octosporis; paraphysibus subclavatis, fuscidalis, 4-6 μ cr.; sporidis monostichis ellipsoideis 1-2 guttulatis, 25-40 × 11-15, hyalino-fuscidulis.

Hab. ad terram, Monokocari in Nova Guinea.—Pulchra species, Sarcosomati celebico affinis.

2. Sarcosoma Le-Rati Pat., Bull. Soc. Mycol. Fr. 1915 p. 34. — Asco-7353 matibus gelatinosis, sessilibus, hemisphaericis, supra truncatis, 2-3 cm. altis, 4-5 cm. latis, brunneo-castaneis, corrugatis, villosis, pilis simplicibus, septatis, 100 × 6-8, sparsis vel dense proximatis, castaneis, obtusis tectis; disco levi plano, concolori margine tumido; contextu tremelloso, brunneo; ascis cylindraceis, 100 × 15, operculatis, 8-sporis; sporidiis monostichis, ellipsoideo-elongatis, fuscidu-

lis, rugulosis, rectis, 33-40  $\times$  10-12; paraphysibus filiformibus, fuscidulis, 3-5  $\mu$  cr., septatis, obtusis.

Hab. ad truncos, Mont Mou, Nova Caledonia (LE RAT). - Affine S. javanico et S. celebico.

3. Sarcosoma turbinatum Wakef., Gard. Kew, Bull. 1917, p. 109. — 7354 Ascomatibus sessilibus v. substipitatis, turbinatis, 2-2,5 cm. diam., 2,5-3 cm. altis, extus fuliginosis, pilis brunneis septatis apice obtusis 4-10 μ crassis vestitis, intus subhyalino-gelatinosis; ascis cylindricis, 350 × 10-15, parte sporifera circ. 160 μ longa; paraphysibus hyalinis, filiformibus, apice vix incrassatis, ascos superantibus; sporidiis hyalinis ellipsoideis v. fusoideis, primo utrinque obtuse apiculatis, episporio maturitate minute granuloso, 28-30 × 12-15.

Hab. ad ligna, in prov. occid. Nigeriae merid., Africae.

OMBROPHILA Fr. — Syll. VIII p. 613, X p. 38, XI p. 425, XIV p. 801, XVI p. 766, XVIII p. 133, XXII p. 721.

Ombrophila morthieriana Rehm — Syll. VIII p. 618 — var. mega-7355 lospora Bresadola, Ann. Mycol. 18., 1920, p. 55. — A typo differt notis sporologicis majoribus, sc. ascis 140-150 ≠ 12, jodo leviter et transitorie caerulescentibus; sporidiis 24-28 ≠ 7, sub jodo 1-septatis. — Cetera concordant.

Hab. ad acus Laricis, Ritten prope Banzanum in Tirolia australi (DIETTRICH.).

2. Ombrophila fulvescens Bresadola, Ann. Mycol. 18., 1920, p. 54.— 7356 Ascomatibus gelatinosis, sessilibus, sparsis, glabris, pulvinatis, dein patelliformibus, e pallido fulvellis, exsiccando disco fuscidulo, 1 mm. circiter latis,  $^1/_2$  mm. crassis, contextu pro senchymatico; ascis clavatis,  $65\text{-}75 \times 7\text{-}8$ , jodo haud tinctis; paraphysibus 2  $\mu$  crassis, apice clavato 3  $\mu$ ; sporidiis hyalinis, cylindraceis,  $8\text{-}9 \times 4$ .

Hab. ad truncos Abietis excelsae, Monzoni in regione tridentina.

3. Ombrophila thujina Peck in N. York StateMus. Bull. 150 [1910] p. 60 7357 (1911).—Ascomatibus minutis 500-750  $\mu$  latis, sparsis vel subcaespitosis, sessilibus vel subsessilibus, disco plano vel convexo submarginato, pallide aurantiaco; ascis oblongis vel subclavatis, 90-100  $\times$  15-20, paraphysibus filiformibus apicibus liberis intermixtis; sporidis in asco confertis vel subdistichis, oblongis vel subfusiformibus, utrinque rotundatis, hyalinis,  $18-22 \times 6-8$ .

Hab. in ramulis Thujae occidentalis prope London, Ontario, Amer. bor. (DEARNESS). - Affinis O. enterochromae (Peck)

Sacc. sed notis variis distincta.

4. Ombrophila limosa Rehm, Ann. Mycol. XI, 1913, p. 154. - Ascoma- 73 tibus in foliis late denigratis dispersis sessilibus, primitus globulosis, dein, disco orbiculari tenuissime marginato explato, brevissime crasse stipitatis, cinereo-fuscis, siccis atris, globosis, 0,2-0,25 mm. lat. et alt., excipulo parenchymatice ex hyphis cinereis et ad marginem arcte conglutinatis contexto, gelatinoso; ascis oblongis, sessilibus, octosporis, -60 × 12, J +; sporis oblongis, unicellularibus, utrinque uniguttatis, hyalinis, rectis, 12 × 5-6, distichis; paraphysibus filiformibus, septatis, hyalinis, 3-4 µ lat.

Hab. ad folia putrida Caricis limosae, London Ont, Canada, Amer. bor. (J. DEARNESS).

5. Ombrophila megalospora Rea, Trans. Brit. Mycol. Soc. V (1916) p. 7359 256 tab. IV: — Ascomatibus 1-2,5 mm., rarissime ad 4 mm. latis, e candidis incarnatis, demum nigrescentibus, cupuliformibus, e convexo explanatis, humidis subgelatinosis demum cartilagineis; stipite 1 mm, alto, 3-5 mm, crasso; ascis clavato-subfusoideis, 120-135 \* 12-13, basi attenuatis, octosporis, foramine marginato, jodo haud tinctis; sporidiis hyalinis, navicularibus, saepe curvulis, utrinque attenuatis, 27-30 > 6, mono vel distichis, intus minute granulosis; paraphysibus ascos excedentibus, adglutinatis, sursum leniter incrassatis, 130-145 \* 2-3, septatis, apice intus granulosis.

Hab. ad folia emortua Caricis inflatae, prope Inver., Dunkeld, Perthshire, Britannia (C. Mc. Intosh).

6. Ombrophila Bataillei Boud. in Bull. Soc. Myc. Fr. XXXIII (1917) 7360 p. 17, tab. V fig. IV.- Pro genere major, 5-13 mm. lata, breviter stipitata, pallide fulva, subtus alba; ascomatibus convexis, undulatis, sublobatis, pediculo crasso breviter suffultis, subtus minutissime et parce atro-squamulosis; ascis cylindraceo-clavatis, octosporis, foramine marginato, 90-100 \* 18-19; paraphysibus cylindricis, albis, intus superne granulosis, 3 µ crassis; sporidiis ellipsoideo-fusoideis, hyalinis, intus saepe granulis duobus oleosis minutis aut pluribus donatis dein evanescentibus et ad germinationem uniseptatis,  $14-18 \approx 4,5-5$ .

Hab. ad terram sed in quisquiliis reperta Besançon et Savigné, Gallia. - Affinis O. clavus var. grandis.

7. Ombrophila speluncarum Lagardo, Biospeleol. XXXII, 1913, p. 286 7861 t. XIII f. 7-9.— Ascomatibus stipitatis, v. subsessilibus, convexis, crassiusculis levibus, 2-6 mm. diam., rarissime usque ad 12 mm., pallide brunneis, substantia molli elastica; stipite (ubi adest) usque

ad 7 mm. alto, sursum dilatato, pallidiore; disco convexo, interdum ruguloso-rimoso; ascis clavatis, 60-75 \$ 5-7, deorsum sensim tenuatis, octosporis, apice jodi ope caerulescenti; paraphysibus septatis, sursum leviter clavatis; sporidiis submonostichis ovoideis,  $5.7 \times 3.3, 5$ , levibus, intus granulosis, hyalinis.

Hab. in fragmentis ligneis putrescentibus in spelancis, La Preste, Prats-de-Mollo, Galliac merid.

8. Ombrophila sanquinea Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 7362 of Sci. VIII (1913) p. 192. — Ascomatibus sparsis, sessilibus, primitus cyathoideis dein patellariformiter usque ad 1 cm. lat. explanatis, scipite brevi, crasso, cylindraceo, albidulo, 500 µ longo 300 µ lat. fultis, glabris, rubro-sanguineis, disco orbiculari, crasse marginato, plano, sicco subcomplicato, excipulo crasso, sanguineo, prosenchymatice contexto, gelatinoso; ascis clavatis, apice rotundatis, usque ad 130 × 10, paraphysibus filiformibus 1,5 µ cr., ad apicem complicatis, guttulis aureis repletis; sporidiis distichis, fusiformibus, utrinque acutatis, interdum subcurvatis, continuis, hyalinis, 20-24 \* 3.

Hab, in ligno sieco humistrato, Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (C. F. BAKER). — Affinis O. rubescenti-roseae Rehm, a qua differt sporidiis et paraphysibus alienis.

9. Ombrophila helotioides Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 7363 of Sci. VIII (1913) p. 262 — Ascomatibus sessilibus, cyathoideo-stipitatis, disco demum orbiculariter explanato, tenuissime marginato, usque ad 5 mm. diam., stipite cylindraceo, 1-1,5 mm. longo, 0,3 mm. lato, aurantiaco-rubris, stipite sicco albescente, carnoso-gelatinosis, parenchymatice contextis; ascis cylindraceis, apice rotundatis, usque ad 180 × 9, octosporis, J., paraphysibus filiformibus, 1 μ, ad apicem dilute flavidulam 1,5 μ cr.; sporidiis distichis, fusiformibus, rectis vel subcurvatis, utrinque acutatis, continuis, hyalinis,  $20-24 \approx 3$ .

Hab. ad ramum emortuum, Luzon, Prov. Laguna, ins. Philipp. (C. F. BAKER). — Sporidiis majusculis a speciebus affinibus (O. roseola Bres., O. aurantiaca Mass., O. rubescenti-rosea Rehm) facile dignoscenda.

10. Ombrophila indica Syd., in Syd. et Butler, Ann. Mycol. IX, 1911, 7364 p. 375. — Ascomatibus sparsis, sessilibus v. rarius ad basim stipitiformiter contractis, explanatis, 1/2-11/4 cm. longis latisque, margine revolutis, glabris, concoloribus, in vegeto ochraceo-brunneis, in alcohole ochraceis v. sordide ochraceis gelatinosis; ascis cylindraceis, 130-160 \* 10-14, octosporis, paraphysatis; sporidiis mono-

stichis, ellipsoideis, continuis, hyalinis, 14-17 × 7-9.

Hab. ad lignum cariosum humi jacens, Dehra Dun, India or. (E.

- J. BUTLER). Ombr. aurantiacae Mass. et O. brunneae Phill. proxima.
- 11. Ombrophila pura (Pers.) Petrak, Ann. Mycol. XII, 1914, p. 478.— 73
  Ita vocanda est Peziza pura Pers., Bulgaria pura Fr., Ombrophila violascens Rehm.

#### GLOEOPEZIZA Zuk. - Syll. X p. 41, XIV p. 804.

1. Gloeopeziza turricula Sacc. et Peyronel in Boll. tecn. R. Ist. sperim. Tabacchi in Scafati n. 1 (1914) tab. fig. II, et Ann. Mycol. XII,
1914, p. 282. — Ascomatibus dense gregariis, superficialibus, terrigenis, pusillis, erectis, cylindraceo-conoideis, apice truncatis, deorsum stipitato-incrassatulis, 250 micr. altis, 150 micr. crassis, lateritio-rubris, sub microscopio dilute roseolis, excipulo prorsus carentibus et ex ascis paraphysibusque tantum constantibus, glabris,
carnosulis, vix gelatinosis; ascis dense parallele stipitatis, jodi ope
immutatis, apice rotundatis, deorsum breviter tenuato-stipitatis, e
basi prosenchymatica ascomatis oriundis, 120-140 \* 12-18 (parte
sporifera), octosporis; sporidiis monostichis, ellipsoideis, levibus,
14-18 \* 9-12, hyalinis, minute 1-2-guttulatis; paraphysibus filiformibus, hyalinis, ascum aequantibus. — Carpogonia et antheridia
observata!

Hab. ad terram udam calidam ad culturam Nicotianae paratam, ubi crustas extensas rubescentes efformat plantulasque vexat, Istituto Sperimentale per la Coltivazione dei Tabacchi, Scafati, prope Neapolim Italiae merid. (A. SPLENDORE).

- ORBILIA Fr. Syll. VIII p. 621, X p. 39, XI p. 426, XIV p. 802, XVI p. 767, XVIII p. 137, XXII p. 722. Myridium F. E. Clements, Genera of Fungi 1909, p. 67, 174 (est Orbilia polyspora; typ. Orb. myriospora Ph. et Harkn., Sacc., Syll. VIII p. 631, subg. Myriella.
- 1. Orbilia (Hyalinia Boud.) Ulicis J. E. Chenantais, Bull. Soc. Mycol. 7367 de Fr., XXXIV, 1918, p. 39, tab. III fig. 2.— Ascomatibus sessilibus <sup>1</sup>/<sub>2</sub>·1 mm., clausis, subglobosis, urceolatis dein patellariformibus, levibus, ceraceis, margine lacerato, lilacinis v. incarnatis, udis translucentibus; ascis cylindraceo-clavatis, 70 × 6; sporidiis virguliformibus, guttula cylindrica nitenti sursum praeditis, 12-13 × 2; paraphysibus simplicibus ad apicem vix inflatis.

·Hab. insuper corticem Ulicis, la Bouvardière prope Nantes,

Gallia. — Facile distinguitur, praecipue a *Orbilia hesperidea* Roll., sporidiis incurvatis, in parte concava nitide ellipsoideo-unigutțulatis; ascis quandoque 8-10  $\mu$  calcaratis.

2. Orbilia crystallina Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7368 1919 (1920), p. 114. — Globosa ceracea, gregaria, aurantiaca, 1-2 mm. diam , superficie ob cellulas latas prominentes pellucidas crystallina ; hymenio primum membrana crystallina tecto dein secedenti, margine denticula hinc inde ornato, lato, e depresso convexo ; ascis cylindraceo clavatis, 9  $\mu$  diam.; paraphysibus tenuibus filiformibus, flavis, 2-3  $\mu$  cr.; sporis monostichis, hyalinis, levibus, ellipsoideis, utrinque acutatis, 18  $\times$  7.

Hab. ad terram, Cascade, Hobart, Tasmania.

3. Orbilia calochroa Sydow, Engler' Botan. Jahrbüch., 54., 1916, p. 7369 258. — Ascomatibus sparsis, orbicularibus, 1,5-3 mm. diam., superficialibus, subsessilibus vel stipite brevissimo crassiusculo concolori suffultis, vivide aurantiacis, in sicco vix contractis, disco plano, levibus, glabris; ascis cylindraceis ad apicem incrassatis, subsessilibus vel brevissime stipitatis, 125-150 × 12-15, octosporis; paraphysibus simplicibus, hyalinis, ca. 1,5 μ, ad apicem usque 2 μ crassis; sporidiis oblique monostichis usque distichis, fusoideis, utrinque leniter attenuatis, sed obtusis, continuis, hyalinis, 20-25 × 6-8.

Hab. in cortice udo, « Felsspitze », Nova Guinea nord or. Africae (LEDERMANN).

4. Orbilia Boydii A. L. Smith et J. Ramsbottom, Trans. Brit. Myc. Soc. 7370 IV, pt. I, 1912, p. 168 (1913).— Ascomatibus erumpentibus, sparsis, patellato-applanatis, fusco-succineis, circa 0,5 mm. latis; ascis clavatis, breviter stipitatis, 70-80 × 10-13, jodo non caerulescentibus; paraphysibus filiformibus, sursum clavulatis, usque ad 7 μ latis, ramulosis; sporidiis oblongis, rectis vel leniter curvatis, 15-23 × 3-5.

Hab. in caulibus Vaccinii Myrtilli, prope Beith, Ayrshire, Britannia (D. A. BOYD).

HAEMATOMYCES (Berk. et Br., Syll. VIII p. 633, X p. 40, XXII p. 726) emend. T. Petch, Ann. of Bot. v. 33., n. 132, 1919, p. 418.— Stroma superficiale, pulvinatum plerumque cerebriforme v. convolutum, tremelloideum v. carnoso-ceraceum, supra strato aseigero paraphysato, superficiale immarginato praeditum; sporidia continua hyalina. — Sec. Cl. Petch, potius in Helvellaceis (prope Psilopeziam Berk.) quam in Bulgariaceis collocandum,

1. Haematomyces carneus Rehm, Ascomyc. Philipp. II, in Philipp. Journ. of Sci. VIII (1913) p.262.— Ascomatibus tremelloideis, orbiculatim multoties complicatis, 1-1,5 cm. diam., 1 mm. crassis, sinuato-lobatis, gyrosis, obtuse marginatis, coriaceis, subgelatinosis, carneo-rubescentibus, ad basim albescentibus, glabris vel verruco-sulis, plectenchymatice contextis, hyphis 4-5  $\mu$  cr., sessilibus; ascis cylindraceis, apice rotundatis, crasse tunicatis, 150  $\approx$  12, J-, octosporis, paraphysibus filiformibus, obtusis, 2  $\mu$  cr., hyalinis obvallatis; sporidiis monostichis, ellipsoideis, utrinque obtusis, interdum subcurvatulis, continuis, magni-2-guttatis, levibus, hyalinis, 18-20  $\approx$  9. — Color ascomatis in aqua solubilis.

\*Hab. ad fragmenta lignea putrida, humijacentia, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

2. Haematomyces Petchii Trott. n. nov., Haemat. carneus T. Petch, l. 787 c., non Rehm. — E pallide rubro-purpureo carneo, pulvinato, cerebriformi usque 1,5 cm. lato superficiale, subtranslucido, tremelloideo; ascis cylindraceis, 160 × 10-12, non operculatis octosporis; paraphysibus crassis, apice inflatis, diffluentibus; sporidiis oblique monostichis, hyalinis, ovoideis, crasse tunicatis, apicibus subtruncatis, 15-18 × 8-9, raro 26 × 10.

Hab. ad ligna emortua, folia etc., Dalwita, Ceylon, Asia. — Jodi ope, asci cyaneo, paraphyses et sporae luteo tinguntur.

#### Sect. 2. Phaeosporae

BULGARIA Fr.-- Syll. VIII p. 636, X p. 41, XIV p. 804, XVI p. 770, XVIII p. 140, XXII p. 726.

1. Bulgaria prunicola Sydow, Ann. Mycol. XI, 1913, p. 61. — Asco- 7373 matibus sparsis v. binis trinis consociatis, e cortice erumpentibus, breve crasseque stipitatis, stipite ca. ¹/₂ mm. alto crassoque, in udo leniter convexis, in sicco turbinatis, orbicularibus, glabris, 1·2 mm. diam., atris, gelatinosis, in sicco duris; ascis cylindraceis, apice rotundatis, haud incrassatis, basi brevissime stipitatis, 75·95 × 10·14, octosporis; paraphysibus numerosissimis, simplicibus, aequaliter filiformibus, 1 μ circ. crassis, hyalinis; sporidiis mono-distichis, anguste ellipsoideis, continuis, hyalinis (tandem fuscidulis?), maturis eguttulatis, 18-17 × 5·6.

Hab. in ramis Pruni jamasakurae, Kawanye-mnra, prov. Mino Japoniae (K. HARA). — Bulg. pusillae Syd. proxima.

## Sect. 3. Didymosporae

CALLORIA Fr. — Syll. VIII p. 639, XI p. 427, XIV p. 805, XVI p. 772, XVIII p. 143, XXII p. 728.

Calloria tasmanica Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7374 1917 (1918), p. 107. — Ascomatibus gelatinosis, aurantiacis, juventute concavis, maturitate convexis, extus pallidis, sessilibus, levibus, 1-3 mm. diam.; ascis clavatis octosporis; sporidis hyalinis, angustis, curvatis, levibus, 6-10 \* 1-1,5, uniseptatis.

Hab. ad truncum Dicksoniae, Trowatta. Tasmania.

2. Calloria Fairmani Rehm, Ann. Mycol. IX, 1911, p. 366.— Apotheciis dispersis, globulosis, dein disco convexulo, vix distincte marginato, extus glabris, subfuscidulis, 0,1-0,2 mm. diam., excipulo tenuissimo parenchymatico, flavescente, subgelatinosis; ascis clavatis, apice rotundatis, 60 × 8-10, octosporis, Jope; sporis oblongis v. subclavatis, obtusis, unilocularibus dein bilocularibus, hyalinis, 9-10 × 3-4, 1-2 stichis; paraphysibus filiformibus, apice flavidulis conglutinatis.

Hab. ad lignum decorticatum, Lyndowille N. Y., America bor. (FAIRMAN).—Species perexigua conspectu dificillima modo ad Callorium ponenda.

Calloria subalpina Rehm. (ubi?) — var. discrepans Rehm, Ann. Myc. 7376
 X, 1912, p. 353.— A typo differt sporis subfusoideis utrinque acutatis (12·14 × 4) J. ope neg.

H/b, in caulibus vetustis Asteris leucanthemi, prope Königstein a. Elb., Germania (Krieger).

BULGARIASTRUM Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 7377 of Sci. VIII (1913) p. 497. — Etym. a Bulgaria cui analogum ge nus. — Ascomata phyllogena, minuta, caespitosa, erumpenti superficialia, subturbinata, subsessilia vel stipite brevissimo centrali crassiusculo praedita, gelatinosa, atra, in sicco cornea, parenchymatice contexta. Asci clavati vel cylindraceo clavati, octospori, paraphysati, paraphysibus epithecium formantibus. Sporidia didyma, oblonga, hyalina.

1. Bulgariastrum caespitosum Syd, loc. cit. fig. 4.— Ascomatibus semper 7378 hypophyllis, in epiphyllo maculas minutas leniter depressas efformantibus, dense caespitosis et greges discoideos 1-2,5 mm. latos formantibus, erumpenti-superficialibus, subsessilibus vel basi bre-

vissime stipitiformi-contractis, subturbinatis, glabris, gelatinosis, in sicco corneis, atris, disco leniter concavo, contextu parenchymatico e cellulis majusculis 12-17  $\mu$  diam. composito; ascis tereti-clavatis, apice rotundatis, 60-90  $\times$  14-16, octosporis; paraphysibus filiformibus, sursum epithecium densum flavo-fuscidulum formantibus; sporidiis oblique monostichis usque distichis, oblongis vel ovato-oblongis, medio 1-septatis et vix vel leniter constrictis, hyalinis, minutissime guttulatis, 14-16  $\times$  6-7, cellula superiore plerumque late rotundata et paullo crassiore. Status pycnidicus (*Excipulinae* speciem sistens) simul adest habitu ascomatum cum sporulis fusiformibus, plerumque curvatis, diu continuis, dein 1-septatis, tandem spurie 3-septatis, 26-45  $\times$  3,5-4,5, superne late rotundatis inferne sensim attenuatis, hyalinis.

Hab. in foliis vivis Capparidis sepiariae, Luzon, Manila, ins. Philipp. (MERRILL). — Ascomata plerumque 8-16 gregaria.

2. Bulgariastrum africanum Sydow, Ann. Mycol. XIII, 1915, p. 42.— τη Ascomatibus amphigenis, dense caespitosis et greges orbiculares vel, confluendo, irregulares 1-2,5 mm. latos formantibus, erumpentisuperficialibus, basi stipitiformiter contractis, subturbinatis, glabris, gelatinosis, in sicco corneis, atris, disco leniter concavo, contextu parenchymatico ex cellulis 12-18 μ diam. composito; ascis tereticlavatis, apice rotundatis, 60-90 × 14-16, octosporis; paraphysibus filiformibus, sursum clavato-incrassatis (3-4 μ crassis), et epithecium densum atro-coeruleum formantibus; sporidiis oblique monostichis usque distichis, ellipsoideo-oblongis, medio 1-septatis et non vel vix constrictis, hyalinis, 12-15 × 6-7, utrinque rotundatis, cellulis aequalibus vel fere aequalibus.

Hab. in foliis vivis Capparidis Rudatisii, Friedenau, Natal (RUDATIS). — Bulg. caespitoso Syd. ex Philippinis proxima species.

# Sect. 4. Hyalophragmiae

CALLORIOPSIS Sydow, Ann. Mycol. 15., 1917, p. 254. — Statura externa Calloriae sed ascomata gelatinosa, subiculo arachnoideo hyalino superficialiter insidentia, contextu plectenchymatico. Asci clavati, 8-spori. Sporidia fusoidea matura 3-septata hyalina. Typ. gen.:

Calloriopsis gelatinosa (Ell. et Mart.) Sydow, Möllisia g. Ell. et Mart., 7880
 Syll. VIII p. 624 (Orbilia), Coryne gelatinosa Rehm, Syll. XXII p.
 730, Coryne meliolicola (P. Henn.) v. Höhn., Syll. XVI p. 773.

Hab. parasiticum ad hyphas Meliolarum, America bor. tropic.

#### Sect. 5. Dictyosporae

HAEMATOMYXA Sacc. - Syll. VIII p. 633, X p. 40, XXII p. 732.

1. Haematomyxa rufa (Ev. et Ev.) Rehm, Ann. Mycol. X, 1912, p. 397, 7381 Dothiora rufa Ell. et Ev. in herb. Rehm. - Ascomatibus in ligno decorticato, late dealbato gregarie sessilibus, orbicularibus, dein oblongis, obtusis disco atropurpureo, linea atra tenuissima cincto, haud distincte marginato, plerumque convexulo, exasperato, 0.3-2 mm. longo v. lato; ascis ovalibus, crasse tunicatis, 60 70 × 30, octosporis, in hymenio gelatinoso, flavo-fusco innatis obductisqu:; sporis ellipsoideis, transverse 5- longitudinaliter 1 septatis, primitus hyalinis, dein cinereo-fuscis, 25-27 × 9-10; hypothecium ut hymenium J ope coerulee coloratum.

Hab. San Diego, California, Amer. bor.

#### Sect. 6. Scolecosporae

ASTEROCALYX v. Höhn., Sitzungsb. k. Akad. Wiss. Wien UXXI, 1, p. 402 (1912). — Ascomata superficialia, turbinata, breviter pedicellata, excipulo bistratoso, strato interno brunneo, tenui, apice circulariter aperto, strato externo deorsum tenui, lateraliter valde crasso, subhyalino, stellatim laciniato, ex hyphis parallelis cartilagineis contexto. Asci subcylindracei, filiformi-paraphysati, octospori. Sporidia hyalina filiformia. Ob structuram excipuli genus sat peculiare.

1. Asterocalyx mirabilis v. Höhn., loc. cit. tab. II fig. 1-6.— Ascoma- 7382 tibus griseo-brunneis, in vetustate atratis, singulis vel paucis acervatis seriatisve, superficialibus, e mycelio brunneo subcuticulare orientibus, primum obtuse plano-conoideis, dein breviter cylindraceis, demum superne stellatim dilatatis, maturis breviter crasseque pedicellatis, 250-600 \mu latis, 150-300 \mu altis, excipuli strato interno e cellulis 10-14 × 5-8, seriatis composito, paucistratoso, 20-25 μ cr., disciformi, sursum circulatim usque ad 170 µ aperto, hymenium valde superante, strato externo basi tenui, sursum usque ad 200 µ cr., in sectione trigono, ex hyphis parallelis 6-8 µ latis composito, superne in laciniis plerumque 10 triangularibus, stellatim dispositis, 80-200 \* 75-150, fisso; ascis cylindraceis, octosporis, 48-50 \*

5-8, paraphysibus filiformibus apice non incrassatis, 1  $\mu$  latis obvallatis; sporidiis filiformibus, hyalinis, continuis, 40 \* 1.

Hab. in rachide nervisque foliorum Filicis arboreae cujusdam, Tjibodas, Java.

## Fam. 15. Stictidaceae Fr.

#### Sect. 1. Hyalosporae

OCELLARIA Tul. — Syll. VIII p. 654, X p. 45, XIV p. 806, XVIII p. 146.

1. Ocellaria Nashi K. Hara, Morbi arbor, fruct jap. p. 117 f. 14. — A-7 seomatibus initio epidermide teetis, dein erumpentibus, discum sen sim dilatantibus, applanatis, udis flavido-brunneis. 1-3 mm. diam.; ascis tereti-clavatis, apice rotundatis, stipitatis. 8-sporis, 140-160 × 25-28; sporidiis biseriatis elliptico-ovoideis, utrinque rotundatis, hyalinis, 23-25 × 12-16; paraphysibus filiformibus, ramosis, hyalinis, 150-200 × 15-20.

Hab. in ramis Piri sinensis, Prov. Mino, Kawauye, Japonia (K. HARA, 1915).

2. Ocellaria phialopsis Rehm in Ber. Bayer. Bot. Ges. XIII (1912) p. 781 140.— Ascomatibus areis latis ligni dealbatis insidentibus, sparsis, immersis, globoso-clausis, dein urceolato-apertis, discum ciliato marginatum pallide roseum ostendentibus, demum emersis, extus glabris, brunneo-roseis, 0,5 mm. latis, siccis urceolato-clausis; excipulo parenchymatico, brunneolo, glabro; ascis clavatis, sursum rotundatis, 45-50 × 5-6; sporidiis distichis, oblongis, utrinque rotundatis, leniter curvatis, continuis, hyalinis, 8-9 × 1,5 2; paraphysibus filiformibus, hyalinis, 1,5 μ crassis, apice haud incrassatis.

Hab. in ramis Pini silvestris, prope Weismain in Franconia super.

# PROPOLIS Fr. - Syll. VIII p. 633, X p. 40, XXII p. 732.

1. Propolis? Weirii Trav. et Trott.; sine nomine a cl. J. R. Weir in 7388 Journ. Agr. Res. X (1917) p. 99 et seq. descripta et adumbrata species. — Ascomatibus sub epidermide immersis, lenticularibus vel oblongo-ellipsoideis, sparsis, mono-vel biseriatis, in inferiore pagina acuum secus nervum medianum dispositis, per epidermidem longitudinaliter et irregulariter disrupta disco brunneolo convexo emergentibus; ascis cylindraceo-clavatis, 115-150 × 16-19, apice abrupte

rotundatis, basi breviter crasseque pedicellatis, octosporis, poro J+; paraphysibus filiformibus, hyalinis, sursum tenuiter inflatis; sporidiis irregulariter biseriatis, plerumque vero monostichis, hyalinis, continuis, oblongis, utrinque rotundatis, raro obtuse attenuatis, plerumque medio constrictis inde biscoctiformibus, 18-20  $\approx$  6,6-7,4.

Hab. in acubus vivis decoloratis Pseudotsugae laxifoliae in Amer. bor.

- 2. Propolis Leonis (Tul.) Rehm Syll. VIII p. 651 var. weiriana 7386 Sacc., Nuovo Giorn. bot. it. v. XXVII, 1920, p. 79. A typo dignoscitur ascis crassioribus (100-120 × 36), sporidiis distichis (28 × 11-12) et disco pallidiori.— Hab. in ligno radicis intemperiei exposito Laricis occidentalis. Spokane, Washington, Amer. bor. (Weir).
- NAEVIA Fr. Syll. VIII p. 658, X p. 45, XI p. 660, XI p. 631, XVI p. 1065, XVIII p. 594, XXII p. 733. Syn. Habrostictis F. E. Clements, Genera of Fungi 1909, p. 63, 174; est Naevia jodata, typ. N. pallida Fuck., Syll. VIII p. 660.
- 1. Naevia stenospora Sacc., Nuovo Giorn. bot. it. v. XXVII, 1920, 7387 p. 79.— Ascomatibus gregariis, innatis, parce erumpentibus matricem roseo-tingentibus, ceraceis, scutellatis, 1/3 mm. lat., dilute roseis, glabris, contextu tenuissimo, roseo, cellulis oblongis; ascis cylindraceis brevissime stipitatis, apice rotundatis, 45-50 × 7, octosporis; paraphysibus filiformi-clavulatis, raro furcatis; sporidiis, anguste fusoideo-cylindraceis, saepius curvulis, 14-16 × 2-2,3, hyalinis.

Hab in caulibus Heraclei lanati emortuis, Spokane, Washington, Amer. bor.

2. Naevia canadica Rehm, Ann. Mycol. X1, 1913, p. 154. — Ascomatibus dispersis, primitus globoso-clausis, innatis, per epidermidem prorumpentibus, disco orbiculari v. elongato, vix conspicue marginato, plano, albo fiavido, sicco dilute rubescente, 0,15-0,2 mm. diam., membranaceis; ascis clavatis, apice rotundatis, 45 × 4-5, octosporis, J.; sporis oblongis, obtusis, hyalinis, unicellularibus, 5 × 1,5-2, distichis; paraphysibus filiformibus, hyalinis, -2 μ cr.

Hab. ad caules emort. Impatientis fulvae, London Ont. Canada, Amer. bor. (J. DEARNESS).

3. Naevia Vestergrenii Rehm, Ann. Mycol. XI, 1913, p. 153; Vester 7389 gren, Microm. rar. sel. fasc. 63-66 n. 1641. — Ascomatibus in foliorum exsiccatorum pagina superiore plus minusve late fusco deni-

gratis gregariis primitus innatis, dein per epidermidem albescentem laceratam prorumpentibus ab ejusque laciniis marginatis, discum orbicularem, dilute fuscidulum, 0,12-0,5 mm. diam., denudantibus, excipulo parenchymatice cellulis parvulis contexto, fusco, siccis vix conspicuis; ascis clavatis, apice subattenuatis. sessilibus, -35  $\pm$  8-9, octosporis, parvis J +; sporis oblongis v. subclavatis, rectis, 1-cellularibus, hyalinis, distichis, 10  $\pm$  2-3. Paraphysibus filiformibus, apice subcurvatulis, hyalinis, 1  $\mu$ .

Hab. ad folia Ledi palustris, Lapponia Lubensis Joclemsk, Suecia (VESTERGREN).

4. Naevia callorioides Rehm, Ann. Mycol. IX, 1911, p. 366.— Apotheciis dispersis, primitus innatis, globoso-clausis, dein per epidermi dem laciniatim fissam erumpentibus, disco orbiculari, tenuissime marginato, plano, 0,25-1 mm. diam., dilute carneolo, excipulo flavescente, parenchymatice contexto tenuissimo, ascis clavatis, apice obtuse acutatis, 75-95 × 10-12, J. ope +, octosporis; sporis ellipsoideis, unicellularibus, guttis oleosis 2 magnis repletis, hyalinis, interdum subcurvatis, 10-14 × 4-5, distichis; paraphysibus filiformibus, 2,5 μ, apice subcurvatulis v. subramosis -3 μ, hyalinis; hypothecio nullo.

Hab. ad caules herbaceos, N. York, America bor. (Seaver). — N. lutescenti Rehm proxima.

5. Naevia diminuens (Karst.) Rehm — Syll. VIII p. 721 — var. tetra. 781 spora Rehm, Ber. Bayer. Bot. Ges. XIII (1912) p. 143. — Ascis lata basi sessilibus, 60 × 12-13, tetrasporis; sporidiis distichis, fusifor mibus, rectis, utrinque late rotundatis, saepe grosse 2-guttulatis, 20-25 × 5-6; paraphysibus hyalinis, 2 μ, apice ad 3 μ crassis; poro jodi ope caerulescente.

Hab. in calamis Scirpi caespitosi, Grimsel, Helvetia.

6. Naevia grandis Sydow, Ann. Mycol. XI, 1913, p. 268. — Ascomatibus hypophyllis, plerumque seriatim dispositis, primitus clausis, dein epidermidem plerumque in lacinias 4 irregulares disrumpentibus, rotundatis v. ellipticis, <sup>2</sup>/<sub>3</sub> -1 mm. long. (raro supra) et latis, disco plano, griseolo, sicco atro; ascis clavatis, 40·50 × 7·9, octosporis; paraphysibus filiformibus, hyalinis, 1,5 μ latis, apice non incrassatis; sporidis oblique distichis, fusoideis, continuis, hyalinis, 10-11,5 × 2,5-3,5.

Hab. in foliis emortuis Caricis sp., Kawauye-mura pr. Mino Japoniae (К. НАВА).

7. Naevia prahliana Jaap ap. Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 7393

p. 144.—Ascomatibus sparsis, initio immersis et clausis, dein erumpentibus, disco incoloro, tenuiter brunneolo-marginato, 200-250  $\mu$  lato; excipulo tenui, parenchymatico, brunneo, prope marginem cellulis valde elongatis praedito; ascis clavatis, sursum obtuse attenuatis,  $60 \approx 15$ , octosporis; paraphysibus filiformibus, hyalinis,  $1~\mu$ , apice ad  $2~\mu$  crassis; sporidiis distichis, oblongo-ellipsoideis, utrinque rotundatis, continuis, hyalinis, 2-guttulatis,  $12-13 \approx 5$ .

Hab. in culmis Ammophilae arenariae, in Schleswig — N. paradoxoidi valde proxima.

8. Naevia rosella Rehm. -- Syll. VIII p. 660 — f. Impatientis v. Höh- 7394 nel in P. Strasser, Verh. zool. bot. Ges. Wien 69., 1919, p. 366 — Hab. in caulibus putrescentibus I m p a tien tis noli tangere, Sonntaggberg, Austria Inf.

BRIARDIA Sacc. - Syll. VIII p. 663, XI p. 428, XVI p. 776 et 1150.

1. Briardia maquilingiana Rehm, Ascom. Philippin. VII, in Leafit. of 7395 Philipp. Bot. VIII, 1916, p. 2927. — Apothecia maculis utrinque rufis, medio castaneo-brunneis, orbicularibus, circa 5 cm., demum irregulariter -1 cm. latis in epiphyllo gregarie, fere orbiculariter innata, primitus globoso-clausa, folium perrumpentia et discum foveolarem, orbiculariter albido-cinctum, hyalinum, saepe longitudinalem, 0,2-0,5 mm. latum vel longum, denudantia, in hypophyllo plusminusve hemiglobose prominentia. Excipulo fuscidulo crasso cum parenchymate folii connato; ascis cylindraceis, apice rotundatis, -120 × 10, 8-sporis, J-. Sporis oblongis, rectis, utrinque rotundatis, 1-cellularibus, hyalinis, 12 × 5, 1-stichis. Paraphyses nullae.

Hab. ad folia Tetrastigmatis, Mt. Maquiling, Ins. Philipp. (S. A. REYES). — Briardiae roseolutescenti Rehm proxima sed paraphysibus nullis diversa.

2. Briardia hysterioides (Awd. mscrpt. sub Peziza) Rehm, Ber. Bayer. 7396 Bot. Ges. XIII (1912) p. 146. — Ascomatibus sparsis, longitudinaliter immersis, lincaribus, rectis, obtusis, rima anguste marginata apertis sed discum pallidum vix ostendentibus, brunneolo roseis demum fere brunneis, 1-1,5 mm. longis, 250  $\mu$  latis; ascis clavatis, apice rotundatis, octosporis,  $35 \times 5$ , paraphysibus filiformibus, 1  $\mu$ , apice 2  $\mu$  crassis obvallatis; sporidiis haud evolutis.

Hab. in petiolis foliorum marcescentium Tiliae grandifoliae, Arnstadt in Turingia (AUERSWALD).

## Sect. 2. Didymosporae

DIPLONAEVIA Sacc. — Syll. VIII p. 666, XI p. 428, XIV p. 808, XVIII 73
p. 147 — Syn. Naeviella F. E. Clements, Genera of Fungi 1909, p. 63, 174. — Diplocryptis F. E. Clem., l. c. p. 63, 174, est Diplonaevia jodata, typ. gen. D. foveolaris Rehm, Syll. VIII p. 668 (Propolidium).

# Sect. 3. Phragmosporae

PROPOLIDIUM Sacc. - Syll. VIII p. 667, XI p. 429, XIV p. 808, XVIII p. 148.

Propolidium atro-virens (Fr.) Rehm, Discom. p. 168. Oryptodiscus atro-7388 virens (Fr.) Corda, Sacc. Syll. VIII p. 670.— Saccardo, Notae Myc. XX in Naovo Giorn. bot. it. 23., 1916, p. 191.

Hab. in ligno vetusto, aeri diu exposito. Quercus rubrae, Clarksville N. Y., Amer. bor. — Asci 45-50 × 11-11,5 octospori; paraphyses interdum furcatae; sporidia oblonga, 9-12 × 4.5, plasmate 4-partito spurieque (?) 3-septata, hyalina. Adest simul Aposphae-ria allantella Sacc.

# EUPROPOLIS De Not. — Syll. VIII p. 676, XVI p. 780.

1. Eupropolis europaea Sace., Notae Myc. XX in Nuovo Giorn. bot. it. 23., 1916, p. 226.— Ascomatibus gregariis, subcutaneo-erumpentibus, leviter prominulis, disciformi-scutellatis, 175-200 μ diam., totis atris, subceraceis, disco mox aperto, irregulariter circulari, margine inflexo cinctis; excipuli contextu indistincte parenchymatico, fuligineo; ascis parallele positis, crasse clavatis, apice rotandatis, deorsum sensim tenuatis breviterque stipitatis, 80-95 × 20-30, octosporis, paraphysibus creberrimis, filiformibus apice crasse grumosis et epithecium atrum formantibus; sporidiis oblique monostichis v. 2-3-stichis, tereti-oblongis, constricto-3-septatis, utrinque rotundatis, rectis v. curvulis, 30-33 × 9-10, diu subhyalinis, demumfuligineis.

Hab. in ramis corticatis emortuis Tamaricis gallicae, Hérault pr. Montpellier Galliae. — Gonidia nulla observata.

CRYPTODISCUS Corda — Syll. VIII p. 669, XIV p. 809, XVI p. 778, XXII p. 734.

1. Cryptodiscus melanocincus Rehm, Ann. Mycol. IX, 1911, p. 366.— A-7400 potheciis plerumque gregariis, ligno denudato extus nigrescenti primitus innatis, globoso-clausis, dein emergentibus, apice primitus poro apertis, dein urceolatis, tenuissime albide marginatis, denique subsessilibus, patellaribus, disco orbiculari pallido, extus fuscis, scabriusculis, 0,2-0,5 mm. diam., excipulo plus minus crasso, fusco, subparenchymatico; ascis clavatis, apice rotundatis, 50-60 × 10, octosporis, J. ope +; sporis distichis, ellipsoideis, transverse triseptatis, hyalinis, 10 × 5; paraphysibus filiformibus, apice haud incrassatis, interdum dichotomis et curvatulis, hyalinis, 1,5 μ cr.

Hab. ad ramulos decorticatos Aceris ?rubri, Lyndon-wille N. Y., America bor. (FAIRMAN).

2. Cryptodiscus Stictis Rehm, Ascom. exsice. fase. 47, n. 1905; Ann. 7401 Mycol. IX, 1911, p. 2. — Apotheciis disperse crebris, strato extim corticis fatiscentis, rarissime ligni denudati immersis, primitus globoso-clausis, dein urceolato-apertis, disco orbiculari dilute flavidulo, margine niveo tenero granulato cincto, 0,2-0,25 mm. diam.; excipulo tenue. parenchymatice fusce contexto, ad basim e cellulis parvulis versus marginem elongatis; ascis clavatis, apice rotundatis, 70-90 × 12-14, octosporis, J +; sporidiis clavatis, utrinque obtusis, transverse 3-septatis, hyalinis, 12-15 × 6-7, distichis; paraphysibus filiformibus, haud clavatis, 2 μ cr., hyalinis, septatis.

Hab. ad ramos Ilicis a quifolii putrescentes, Messnerhölzl prope Reicheinhall, Bavariae.

3. Cryptodiscus araneo cinctus Fairman, Mycologia, V, 1913, p. 248.— 7402 Ascomatibus sparsis, gregariis v. confluentibus, e punctiformibus 0,5 mm. diam., ligno immersis et poro minuto rotundato apertis, dein semierumpentibus et ore lato v. irregulariter oblongo apertis, filis arachnoideis radiantibus circumdatis, quandoque aetate denudatis, brunneis v. extus ligno concoloribus, disco pallide stramineo et margine irregulari flavo v. brunneo praeditis, rotundatis v. oblongis; ascis cylindraceis, rectis, 8-sporis, 80 × 4-4,5, paraphysibus filiformibus nucleatis circumdatis; sporidiis uniseriatis, oblongo-fusoideis, rectis v. curvatis, granulosis v. 2-4 nucleatis, tenuiter 1-3 septatis, non constrictis, e hyalinis hyalino-viridellis, 9-12 × 1,5-2.

Hab. ad ramos dejectos decorticatos in silvis, Lyndonville N. Y., Amer. bor. (C. E. FAIRMAN).

PHRAGMONAEVIA Rehm — Syll. VIII p. 674, XIV p. 809, XVI p. 779, XVIII p. 148, XXII p. 735. — Syn. Merostictis F. E. Clements, Ge-

nera of Fungi 1909, p. 64, 174; est *Phragmonaevia* non jodata; typ. gen. *Mollisia emergens* Karst., Syll. VIII p. 347.

1. Phragmonaevia Scorodoniae Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 740 p. 153. — Ascomatibus sparsis, initio globoso-clausis, sub cortice nidulantibus dein eum laciniatim disrumpentibus erumpentibusque, subsessilibus, disco rotundato, plano, margine angusto obscuriore, sicco brunneo-rufo, 0,3-1 mm. lato; excipulo glabro, tenui-parenchymatico, luteolo, ad marginem cellulis valde elongatis praedito; ascis cylindraceo-clavatis, sursum leniter attenuatis, octosporis, 100-120 × 15-18; sporidiis distichis, fusoideis, obtusiusculis, rectis vel leniter curvatis, hyalinis, transverse 3-5-septatis, 20-25 × 6-8; paraphysibus filiformibus, 2 μ, apice paullo partito ad 3 μ crassis.

Hab. in caulibus emortuis Teucrii Scorodoniae, prope Schandau ad Elbe, Bavaria.— Cryptodisco Moutoniano valde proxima.

- PROPOLIOPSIS Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2279 Etym. Propolis ot opsis, facies. Habitus, forma atque evolutio ut in gen. Propolis. Asci clavati octospori. Sporidia cylindracea plurilocularia, intra ascum in cellulas singulas secedentia. Hymenium jodii ope cacrulescens.
- 1. Propoliopsis Arengae Rehm, loc. cit. Ascomatibus primitus cortici 7404 immutato innatis eoque tectis, globosis, clausis, dein peridermium laciniatim perrumpentibus, discum circularem vel ellipsoideum, planum, album, farinaceum, arcte laciniis peridermii superantibus cinctum denudantibus, 0,3-2 mm. diam., excipulo proprio tenuissimo vix conspicuo; ascis clavatis, apice rotundatis, subsessilibus, 80-100  $\times$  10-25; paraphysibus filiformibus, apice tenuiter incrassatis, gelatinoso-conglutinatis; sporidiis cylindraceis, subcurvatis, pluricellularibus, hyalinis, 60  $\times$  4, intra ascum in cellulas quadrangulares 4  $\mu$  long. secedentibus.

Hab. in Arenga saccharifera, Los Baños, ins. Philipp. (S. A. REYES).

- XYLOGRAMMA Wallr.— Syll. VIII p. 677, XI p. 429, XIV p. 809, XVIII p. 149, XXII p. 736.— Syn. Xyloglyphis F. E. Clements, Genera of Fungi 1909, p. 64, 174 (didymosporum); typ. X. striola Fr. (? Hysterium, Syll. II p. 737).
- 1. Xylogramma pulverosum Baccarini, Eumyc. Somalia it., in « Mis- 7405 sione Stefanini-Paoli », Firenze 1916, p. 197.— Ascomatibus in maculis dealbatis gregariis sed non confluentibus minusculis ellypticis

vel linearibus, flexuosis, ad 252 μ latis 135 μ crassis, longitudine variis, crasse et atro marginatis; disco plano pulverulento; ascis clavulatis, 35-50 × 9-12, paraphysatis; sporidiis triseptatis cylindricis, 16 \* 3,6.

Hab. in ligno decorticato arboris cujusdam ignoti, Matagoi Somalia it., Africa trop. (PAOLI).

- ODONTOTREMA Nyl. Syll. VIII p. 679, X p. 46, XI p. 429, XVIII p. 150. - Syn. Odontura F. E. Clements, Genera of Fungi 1909, p. 65, 174 (est Odontotrema scolecosporum); typ. gen. O. raphidosporum Rehm, Syll. VIII p. 495 (Belonium).
- 1. Odoniotrema furfuraceum Lorton, Bull. Soc. Mycol. de Fr. 1914, p. 7406 226, t. XIII f. V. - Minutum, 0,5 mm. latum, in ligno immersum, nigrum, margine tenuiter pilis brunneis 1.2-septatis, 15 × 4 longis latisque fimbriato, copiosâque pruinâ albidâ et deciduâ adsperso; hymenio rufo-brunneo; ascis oblongo-cylindraceis, basim versus leniter ventricosis, breveque attenuato-stipitatis, 5-8 sporis,  $70 \times 15$ ; paraphysibus aequalibus, contortis vel rugulosis, simplicibus, continuis; sporis ovatis elongatis, triseptatis, et in maturitate ad septa constrictae,  $15 \times 6$ .

Hab. ad ramos putrescentes dejectos Robinae pseudacaciae, in turfosis Issq-L' Evêque, Gallia.

- MELITTOSPORIELLA v. Höhnel, Ann. Mycol. 16., 1918 p. 211 (Etym. a Melittosporium cui affinis). - Habitus phacidiaceus; fungus carnosulus pallide coloratus ut in Stictidaceis; a Melittosporio differt stratu fructifero J. ope non colorato et sporis septis transversalibus tantum donatis. Typ. gen.:
- 1. Melittosporiella pulchella v. Höhn., l. c. (Syn. Stictis atrocyanea Sacc. 7407 non Fries, Myc. Ven. 1199 (in Paulowonia), Rehmnon Fries, Ascom. exsice. 1976 (in Olea). - Sec. von Höhnel, Stictis atrocyanea Fr. gen. Durellae ducenda est.

#### Sect. 3. Scolecosporae

- STICTIS Pers. Syll. VIII p. 681, X p. 44, XI p. 428, XIV p. 806, XVI p. 776, XVIII p. 146, XXII p. 737.
- 1. Stictis Puiggarii Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 7408 Cienc. Cordoba, t. 23., 1919, Extr. p. 151. - Ascomata fusco-olivacea glaberrima rigida parva 350-750 × 150-250 μ alt., superficialia

laxe gregaria hemisphaerico-patellaria, margine involuta integerrima obtusa, osculo semper latissime aperto, disco concolore; ascis fusoideo-subclavulatis, paraphysibus filiformibus subcoalescentibus densissime obvallatis, octosporis,  $90 \times 15$ ; sporis hyalinis, ascorum longitudine, linearibus, utrinque acuminatis, sursum crassiusculis deorsum sensim attenuatis, 15-20-septatis, in articulis non dissilientibus,  $75\text{-}80 \times 3$ .

Hab. ad corticem vivam arboris cujusdam ignoti (Myrtaceae?), prope Apiahy, Brasilia (J. PUIGGARI).

2. Stictis radiata (L.) Pers. — Syll. VIII p. 682 — var. andina Speg., 740 Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 102.— A typo recedit ascomatibus majoribus, 1-2 mm. diam., margine acutis łaciniatis. Ascis cylindraceis, 180-200 × 8-10, paraphysibus filiformibus tenuibus dense obvallatis; sporidiis filiformibus, gracillimis, rectiusculis, 130-150 × 1,25-1,5.

Hab. ad ramos dejectos putrescentes. Duvaua e dependentis, circa Potrerillos prope Mendoza, Argentina.

3. Stictis crassispora Speg., Mycet. Argent. V1, Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 102. — Matrice extus dense squamosorimulosa, sordide cinerascente, intus dealbata; ascomatibus saepius hinc inde laxe gregariis, immersis, margine albo vix prominulis, 0,5-1,2 mm. diam., disco parum infosso subpulverulento, cinereo; ascis cylindraceis, breviter pedicellatis, 200 × 15, paraphysibus filiformibus dense multiguttulatis crebre obvallatis; sporidiis subfasciculatis, cylindraceo-filiformibus, utrinque attenuato-acutis, leniter curvulis, hyalinis, 7-9-septatis, ad septa lenissime constrictis, 80-100 × 6-7, loculis minute 4-6-guttulatis.

Hab. ad ramos dejectos Tricyclae spinosae, in dumetis Potrerillos prope Mendoza, Argentina.

4. Stictis stellata Wallr.— Syll. VIII p.688 — var. philippinensis Rehm, 7411 Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 403.— Sporidiis filiformibus ca. 60 locularibus, loculis 2-4 μ longis, 2-3 μ cr., demum ad septa subconstrictis; paraphysibus apice ramulosis epithecium hyalinum formantibus jodii ope coeruleo-tinctum.

Hab. in ramulis emortuis? Da e monoropis, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (E. B. COPELAND). — Var. pallidulae Sacc. proxima.

5. Stictis graminicola Lasch — Syll. VIII, 692 — fm. Nardui Gz. Frag. 7412 in Trab. Mus. Nac. Cienc. Nat., ser. Bot. n. 4 (1914) p. 37 extr.—
Ascis cylindraceis 70-80 \* 10-12; sporidiis fasciculatis, filiformibus,

rectis vel curvulis, utrinque obtusius culis, pluriseptatis, hyalinis, 30.40\*2.2.5; paraphysibus filiformibus ascos superantibus, pluriguttulatis vel septatis.

Hab. in foliis siccis Nardi strictae, in montibus Carpetanis, Hispania — An species nova?

- SCHIZOXYLON Pers. Syll. VIII p. 697, X p. 47, XI p. 430, XIV p. 812, XVI p. 782, XVIII p. 152, XXII p. 739.
- 1. Schizoxylon Hippophaës Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 7413 p. 160. Ascomatibus gregariis, sub cortice nidulantibus enunque inflantibus et demum laciniatim disrumpentibus erumpentibusque, initio globoso-clausis dein apertis et discum atratum, margine griseo-album ostendentibus, siccis scutellato-collapsis, 0,4-0,5 mm. latis; contextu crasse parenchymatico, ceraceo, membranaceo, brunneo; ascis cylindricis, sursum rotundatis, circ. 250 × 12-15, paraphysibus filiformibus, septatis, hyalinis, 1,5 μ cr. obvallatis; sporidiis filiformibus, mox in loculis numerosissimis 2 × 1 circ. partitis.

Hab. in ramulis siccis H i p p o p h a ë s , Isar-Auen prope München, Bavaria.

2. Schizoxylon taenioides Speg., Mycet. Argent, VI, Anal. Mus. Nac. 7414 Buenos Aires XXIII (1912) p. 102. — Matrice extus sordide infuscata; ascomatibus hinc inde laxe gregariis, ligno insculptis, ore rotundo 300-350  $\mu$  diam. vix exsertulis, margine obtuso lacero albescente, disco concaviusculo fusco-cinereo; ascis cylindraceis, breviter pedicellatis, 200  $\times$  8 10, apice operculatim dehiscentibus, paraphysibus tenuissimis parcis immixtis; sporidiis fasciculatis, linearibus, rectiusculis, ab apice basim versus sensim attenuatis, 100  $\mu$  longis, apice 3,5-4  $\mu$  basi vix 0,5  $\mu$  crassis, mox in articulos globosos secedentibus, hyalinis.

Hab. in ramis emortuis decorticatis C on daliae lineatae, in dumetis circa Potrerillos prope Mendoza, Argentina.

NEMACYCLUS Fuck. — Syll. VIII p. 701, X p. 47, XI p. 431, XXII p. 741.

Nemacyclus gilvus Rodway, Pap. a Proc. R. Soc. Tasmania f. Year 7415
1917 (1918) p. 107. — Ascomatibus minutis 0,2-0,5 mm. latis, immersis e cuticula prominentibus, ceraceis, pallide flavis, oblongis bilaciniatis, margine rudimentali praeditis; ascis clavatis; sporidiis angustis elongatis, pallidis, fasciculatis, maturitate in articulos numerosos globosos secedentibus.

Hab. in Lepidosperma laterale, Cape Frederick Henry, Tasmania. — Ad gen. Propolis et Stictis proxima.

2. Nemacyclus durmitorensis Bubák, III Beitr. Pilz. Montenegro in 74 Botanikai Közlemények, 1915, p. (51). — Ascomatibus gregariis, initio clausis, in cortice immersis, dein irregulariter stellatim disruptis, 4-6 laciniatis, disco rotundo, plano, griseo, 0,5-1 mm. in diam. periphaerice hyphis brevibus, dilute brunneis marginatis, hypothecio tenui, flavido, pseudoparenchymatico; ascis elongato-clavatis, 75-85 × 8-10, apice subacutis, octosporis, jodi ope paraphysibus et parte inferiore ascorum pulcherrime azurescentibus, parte superiore ascorum et epithecio luteo virescentibus; paraphysibus filiformibus, supra ramulosis, epithecium tenue efformantibus; sporidiis acicularibus, 55-70 × 3, parallelis, rectis vel raro curvulis, 6-9-septatis, hyalinis, guttulatis.

Hab. ad caules emortuos Scrophulariae bosniacae, Durmitor, in loco dicto « Lokvice » (ca. 2400 m.) Montenegro.

- 3. Nemacyclus palmarum Sydow, Ann. Mycol. X, 1912, p. 82.— Asco- 74π matibus sparsis immersis, primitus clausis, dein epidermidem elevantibus et tandem in lacinias 4-6 stellatim disrumpentibus, <sup>3</sup>/<sub>4</sub>-1 mm. diam., orbicularibus, disco plano, albo cinereo; ascis cylindraceis, apice rotundatis 110-145 × 10-14, octosporis; sporidiis vermicularibus, multi-(20-30)-septatis, haud constrictis, hyalinis v. subhyalinis, 80-105 × 3-4; paraphysibus numerosis, ca. 1-1,5 μ cr. Hab. ad folia emortua P a l m a r u m, Hayoep Borneo sud-or. (H. Winkler).
- Nemacyclus Arctostaphyli (Ferd. et Wge) Rehm, Ascom. exsicc. fasc. 7418
   n. 1903, Ann. Mycol. IX, 1911, p. 1.— Ita vocanda est Stictis Arctostaphyli Ferd. et Wge, Syll. XXII p. 737 (cum syn.).

#### Fam. 16. Phacidiaceae Fr.

Phacidiales sensu v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 416-422.

Superficialia v. inserta nec erumpentia, stromatica v. non, excipulo undique v. tantum in parte superiori evoluto, e brunneo membranaceo usque carbonaceo, maturo sapra longitudinaliter v. irregulariter lacerato, raro operculato v. (Leptopeltella) initio subostiolato. — Inter Phacidiales et Dothideales.

#### I. Schizothyrieae v. H.

Excipulo depresso supra cuticulari, insidenti, membranaceo, maturo plerumque supra irregulariter lacerato.

- 1. Sporidia hyalina bilocularia, elongata
  - z. Excipulo mycelio marginali libero destituto
    - a. Paraphyses praesentes

CLYPEOLUM Speg.

(Typ. Clyp. atroareolatum Speg.)

b. Paraphyses nullae

MYCROTHYRIELLA v. H. (Тур. Microphyma Rickii Rehm)

- \$. Excipulo mycelio libero praedito
  - a. Non localigero

SCHIZOTHYRIUM Desm.

(Typ. Sch. accrinum Desm. (= Epipeltis Theiss.)

b. Loculi vix signati

POLYCLYPROLUM Th. (Typ. Polyst. Abietis (v. H.)

2. Sporidia hyalina transverse pluriseptata

Phragmothyriella v. H. (Typ. Myriangella orbicularis Zimm.)

#### II. Leptopeltineae v. H.

Excipulo stromatico v. non, subcuticulari, maturo supra longitudinaliter v. irregulariter lacerato.

- 1. Stroma subcuticulare nullum
  - a. Sporidia unilocularia, elongata hyalina

Phacidina v. H.
(Typ. Phacidium gracilis Niessl.)

- b. Sporidia unil'ocularia, elongata, colorata; stratu basilari hyalino, paraphysibus et mycelio subcuticulari praedito
- ENTOPELTIS v. H. (Typ. Asterina interrupta Wint.)
- c. Sporidia brunnea, bilocularia; stratu basilari hyalino; loculi indistincte evoluti (?)
- THYRIOPSIS Th. et S. (Typ. Dothidea halepensis Cooke)
- d. Sporidia hyalina, 2-4 locularia; paraphyses praesentes; excipula margine plus minus radiata
  - \* Excipula undique evoluta, tenui membranacea, raro ostiolata
  - \*\* Excipula tenuia, magis carbonacea, supra tantum evoluta
- e. Sporidia hyalina, unilocularia, duplicifusoidea; paraphyses praesentes
- LEPTOPELTIS V. H. (Typ. Aylographum filicinum Lib.)

LEPTOPELTELLA V. H.

(Typ. Hysterium perexiguum Speg.)

- DUPLICARIA Fuck.
  (Typ. Duplic. Empetri (Fr.) Fuck.)
- f. Sporidia hyalina, muralia; stratu
   basilari obscuro; paraphyses praesentes

\* Asci clavati; excipula omnino subcuticularia

VIZELLA Sacc.
(Typ. Micropeltis conferta Cooke)

\*\* Asci elavati; excipula epidermidem elevantia

HAPLOPHYSE Theiss.)
(Typ. H. ohnaensis Theyss.)

- g. Sporidia filiformia; paraphyses praesentes
  - \* Excipula lanciformia, longitudinaliter prominenter lacerata
  - \*\* Excipula rotundato angulata, magis distincte laciniatim aperientia

LOPHODERMINA v. H. (Typ. Hysterium melaleucum Fr.)

COCCOMYCES De Not.
(Typ. Cocc. tumida β trigonum (Fr.))

- 2. Stroma subcuticulare praesens
  - a. Sporidia hyalina, elongata, bilocularia; paraphyses praesentes; stroma tenue

SCHIZOTHYRIOMA v. H. (Typ. Schizothyrium Ptarmicae Desm.)

 b. Sporidia duplici fusoidea, unilocularia; paraphyses nullae

BIFUSELLA V. H. (Typ. Rhytisma linearis Peck)

c. Sporidia filiformia, paraphyses praesentes

RHYTISMA Fr. v. H. (Typ. Rh. acerinum Pers.)

#### III. Dermopeltineae v. H.

Stroma praesens v. nullum, intraepidermicum

- 1. Stroma nullum
  - a: Excipula supra et infra evoluta; paraphyses praesentes
    - a. Asci pedicellati; sporidia 1-2-locularia, hyalina; excipula elongata, ostiolo labiis tumidis praedito

HYPODERMA Fr. (Typ. H. Rubi (P.) DC.)

 Asci non pedicellati; sporidia unilocularia, hyalina; excipula ostiolo carentia, irregulariter dehiscentia

HYPODERMELLINA v. H. (Typ. Gloniella sarmentorum Rehm)

 sporidia unilocularia, elongata, hyalina; excipula rotundato-angulata.
 operculo distincto laciniatim aperientia

Pseudophacidium Karst.

(Typ. Ps. Ledi (Alb. et Schw.) Karst.)

 d. Sporidia hyalina, clavata, infra elongatoacuminata; excipula elongata, non operculata nec ostiolata

Hypodermella Tub. (Typ. Hyp, Larieis Tub.)

- e. Sporidia filiformia
  - \* Excipula elongata, lanciformia, longitudinaliter lacerata

LOPHODERMELLINA V. H. (Typ. Xyloma hysterioides Pers.)

\*\* Excipula rotundato-angulata, demum laciniatim aperientia

COCCOMYCELLA V. H. (Typ. Placidium quereinum Desm.)

f. Sporidia brunnea, unilocularia, elongata; operculum sublenticulare

PSEUDOTROCHILA V. H.

(Typ. Cryptomyces (Criella) Rhododendri Rac.)

 Excipula supra tantum evoluta, stratu basilari hyaiino; sporidia hyalina unilocularia

MACRODERMA V. H. (Typ. Rhytisma Curtisi Berk, et Rav.)

a. Sporidia unilocularia, elongata, brunnea

NYMANOMYCES P. Henn. (Typ. Rhytisma Aceris Laurini Pat.)

b. Sporidia filiformia

XYLOMA Pers.
(Typ. X. salicinum Pers.)

#### IV. Phacidiaceae v. H. (non Auct.)

Fungi subepidermici profunde immersi, in foliis corticibusque parasitici, raro (Cocco-mycetella) in ligno denudato evoluta.

#### I. Stroma praesens

- a. Stroma undique aegre limitatum carbonaceo-parenchymaticum, operculo laciniato praeditum; sporidia elongata, hyalina, unilocularia
- CRYPTOMYCINA v. H. (Typ. Sphaeria Pteridis Repent.)
- b. Stroma hyalino-plectenchymatic im indeterminatum; hymenio longitudinaliter effuso, parvo, ramoso radiatim ordinato, longitudinaliter aperto; sporidia hyalina pluriseptata

Albona Racib. (Typ. A. Stella nigra Rac.)

#### II. Stroma nullum

z. Excipulum supra diu clausum , operculo crasso ; asci et paraphyses muco subcartila gineo immersi ; sporidia hyalina muralia

HYSTEROPSIS Rehm.
(Typ. H. culmigena Rehm)

- β. Excipulum supra rimose v. laciniatim aperiens
  - a. Sporidia hyalina, elongata unilocularia; excipulum rotundatum
    - \* Ostiolum margine. tumidum; excipulum tirmum; stratu basali (plerumque) obscure colorato

\*\* Margine non tumido; excipulum tennior; stratu basali hyalino PHACIDIUM Fr. (Typ. Ph. lacerum Fr.)

- Naevia Fr.-Rehm (Typ. N. minutissima (Auersw.) Rehm)
- b. Sporidia brunnea, elongata, unilocularia; excipulum rotundatum
  - \* Excipulum parietibus firmis donatum

\*\* Excipulum parietibus tennioribus donatum HYMENOBOLUS Mont. (Typ. H. Agaves Dur. et Mont.)

PHAEOPHACIDIUM P. Henu. (Typ. Ph. Escalloniae Henn. et Lind.)

COCCOMYCETELLA V. H. (Typ. Odontotrema belonospora Nyl.)

- c. Sporidia filiformia. In ligno denudato vigens, habitus vero Coccomyces
- d. Sporidia filamentosa. In ligno denudato non vigens
  - \* Excipulum elongatum, lanceolatum, longitudinaliter rimosum

.

LOPHODERMIUM Chev. (Typ. Lophoderm. arundinaceum (Sch.) Chev.)

\*\* Excipulum rotundatum, laciniatim dehiscens; asci in muco firmo immersi

MOUTONIELLA Penz. et Sacc. (Typ. M. polita Penz. et Sacc.)

e. Sporidia hyalina transverse uniseptata; excipula pezizacea

\* Parasitae in foliis. Margine excipuli non laciniato

SPHAEROPEZIA Sace. (Typ. Sph. alpina Sace.)

\*\* In liguo vigentia, Margine excipuli irregulariter minuteque dentato

ODONTOTREMA Nyl. (Typ. O. minus Nyl.)

#### V. Phacidiostromaceae v. H.

Stroma totam crassitudinem foliorum usque ad exteriorem duarum epidermatum membranam occupans; in caulibus in-et infra epidermide evolutum et in parenchymate corticali profunde immersum.

 Sporidia unilocularia, elongata, hyalina; paraphyses praesentes; stroma indistincte limitatum

PHACIDIOSTROMA V. H. (Typ. Xyloma multivalve DC.)

2. Sporidia filiformia

PACHYRHYTISMA V. H. (Typ. Rhytisma symmetricum J. Müll.)

3. Sporidia supra clavata, infra filiformi-acutata, hyalina, unilocularia

PLAGUNTIUM Ehrb.-v. H. (Typ. Pl. Andromedae (Pers.) Ehrb.)

4. Sporidia 1 (- 2 f) locularia; stroma caulicolum indeterminatum

APORHYTISMA V. H. (Typ. Xyloma Urticae Wallr.)

Huc pertinent probabiliter gen. Criella (sp. typ. Cr. austrocaledonica (Cr.) Sacc.) nec non Phacidiostromella v. H. ad int, in foliis Symploci in ins. Java.

#### VI. Cryptomyceteae v. H.

Infraperidermici, raro in ligno denudato vigentes

- I. Infraperidermici
  - a. Stromatici

Stroma infra hyalinum, peridermio adnatum; operculum crassum, laciniatim apertum; sporidia hyalina unilocularia, elongata

CRYPTOMYCES Grev. (Typ. Cr. maximus (Fr.) Rehm)

- β. Stroma basali praesens v. nullum
  - a. Sporidia hyalina unilocularia elongata; excipulum rotundato-angulatum, laciniatim apertum *Phacidio* conforme

\* Paraphysatum

MYXOPHACIDIUM V. H.

(Typ. Pseudophaeidium degeneraus Karst.)

\*\* Aparaphysatum

MYXOPHACIDIELLA V. H. (Typ. Phacidium Betulae Rehm)

- b. Sporidia filiformia uni-plurilocularia
  - \* Stratu basali hyalino valde inerassato; excipulum parum lateraliter evolutum, tenue

Sponomega Corda (Typ. Spor. degenerans (Fr.) Corda)

- \*\* Stratu basali brunneo, tenue; excipulum lateraliter valde incrassatum
  - 1. Excipulum compressum, rima longitudinali apertum
  - 2. Excipulum rotundatum v. elongatum, laciniatim apertum

Colpona Wallr.
(Typ. C. quercinum (Pers.) Wallr.)

THERRYA Penz. et Sacc.
(Typ. Xyloma Pini Alb. et Schw.)

- II. In ligno denudato vigentes
  - Sporidia hyalina e longata, transverse uniseptata; coeterum ut in Therrya
  - 3. Sporidia colorata, muralia

XYLOPEZIA V. H. (Typ. Peziza hemisphaerica Pers. ?)

PLEIOSTICTIS Rehm.
(Typ. Pl. propolioides Rehm.)

Phacidiales incertae sedis: *Hypodermopsis* Earle (H. Sequoiae), *Graphyllium* Clements (Gr. Chloës).

#### Sect. 1. Hyalosporae

PHACIDIUM Fr.— Syll. VIII p. 709, X p. 48, XI p. 431, XIV p. 813, XVI p. 783, XVIII p. 156, XXII p. 742.

1. Phacidium Gaultheriae Dearn., Mycologia, 9., 1917, p. 350. — Asco-7419 matibus sparsis, in areolis matricis dealbatis distinctis, stellatim dehiscentibus 0,7-1,2 mm. diam.; areolis caules penitus v. partim occupantibus, linea elevata cinetis; ascis tereti-clavatis, 90-110 × 10-12; paraphysibus copiosis, linearibus, subinde ramosis; spori-

diis hyalinis, oblique uniseriatis v. sub-biseriatis, 1-nucleatis v. grumosis,  $19\text{-}22 \times 6\text{-}6,5$ .

Hab. in ramulis vivis Gaultheriae Shallon (Ericaceae), Vancouver Island (J. MACOUN).

2. Phacidium? Parinarii P. Henn., F. S. Paul. IV (Puttem.), Hedw. v. 7420 48., 1909, p. 13.— Ascomatibus epiphyllis gregarie effusis, innatosuperficialibus, atro-nitentibus, primo clausis, dein rimoso-dehiscentibus; ascis paraphysatis, clavatis, apice rotundatis, 8 sporis, 80 × 7 (plerumque immaturis); sporis oblique monostichis oblongis vel ellipsoideis, continuis, hyalinis, ca. 12 × 6.

Hab. in foliis Parinarii sp. (Rosaceae), Morro Pellado, S. Paulo, Brasilia.

3. Phacidium lignicola Peck, in N. Y. State Mus. Bull. 157 (1911) p. 30 7421 et 114 (1912). — Ascomatibus subsuperficialibus, 1 mm. circ. latis, orbicularibus vel late ellipsoideis, prominentibus, rugosis, atris, laciniatim se aperientibus, margine dentibus 3-5 ornatis, disco nigricante; ascis clavatis, 60-80 ≠ 10-12; sporidiis confertis vel subdistichis, continuis, rectis vel leviter curvis, oblongis, interdum basi leviter attenuatis, hyalinis, 12-15 ≠ 3,5.4.

Hab. in ligno decorticato Populi tremuloidis (Salicaceae), Thompsons Lake, Albany co., Amer. bor.

4. Phacidium simplocinum Syd., in Syd. et Butl., Ann. Mycol. IX, 1911, 7422 p. 376. — Ascomatibus hypophyllis, sparsis, maculis indeterminatis flavidis plerumque solitarie insidentibus, immersis, dein plus minus erumpentibus, 1-2 mm. diam., rotundatis, planiusculis, tandem irregulariter laciniatim apertis, atris, disco concolore; ascis cylindraceis longe stipitatis, cum stipite  $65\text{-}100 \times 7\text{-}10$ , octosporis; paraphysibus copiosissimis, filiformibus ascos superantibus, tenuibus, 1,5-2  $\mu$  latis, septatis apice non incrassatis; sporidis monostichis, ellipsoideis, continuis, hyalinis, 6-9  $\times$  3-5.

Hab. in foliis vivis Symplocaceae), Durjeeling, Indiae Or. (W. Mc RAE).

PHACIDIELLA A. Pot., Zeitschr. Pflzkr. XXII (1912) p.147.—Ascomata stromate immersa, applanata, rotundata. Asci cylindracei. Sporidia monosticha, ellipsoidea, hyalina, 1-2-guttulata. Paraphyses copiosae, filiformes, sursum violaceae et epithecium crassiusculum efformantes, jodo haud coerulescentes.— Status pycnid. Phacidiopycnis Malorum.

1. Phacidiella discolor (Mont. et Sacc.) A. Pot. = Phacidium discolor 7423 Sacc., Syll. VIII p. 716.

- PSEUDOPEZIZA Fuck. Syll. VIII p. 723, XI p. 431, XIV p. 813, XVI p. 784, XVIII p. 156, XXII p. 743.
- 1. Pseudopeziza campestris Rehm, Ber. Bayer. Bot. Ges. XIII (1912) 74 p. 167. Ascomatibus hypophyllis, in areis pallidis late extensis valde copiosis, prominulis, initio clausis dein applanato-expansis, disco pallido tenuiter marginato, extus glabris, 0,1-0,15 mm. diam.; contextu tenui-parenchymatico, dilute brunneolo, sicco rufo brunneo; ascis fusoideis, breviter pedicellatis, octosporis, 50-60 × 8-10; sporidiis distichis, ellipsoideis, rotundatis, continuis, guttulis duabus majoribus et duabus minoribus praeditis, hyalinis, 14-16 × 5; paraphysibus indistinctis.

Hab. in foliis putrescentibus Aceris campestris (Aceraceae), in Prignitz, Brandeburgia (JAAP).

- 2. Pseudopeziza Trifolii (Bernh.) Fuck. Sacc., Syll. VIII p. 723. 745 f. Trigonellae Gonz. Frag., Microm. España y Cerdana, in Trab. Mus. Nac. Cienc. Nat. Madrid Ser. Bot. n. 9, 1916, p. 39. f. Medicaginis (Lib.) Sacc. affinis, differt sporulis minoribus, S-10 \* 3,5-5, monostichis vel subdistichis. Hab. in foliis Trigonellae monspeliacae (Leguminosae), prope Madrid (J. Cogolludo).
- 3. Pseudopeziza Vleugelii Rehm, in Vleugel, II Beitr. Pilzfl. Umea n. 7426 339 (descriptio nulla); Svensk Bot. Tidskr. 11., 1917, p. 312. Cnfr. descr. in Syll. XXII p. 745.
- TROCHILA Fr. Syll. VIII p. 728, X p. 49, XIV p. 814, XVI p. 785, XVIII p. 158, XXII p. 745.
- Trochila Craterium (DC.) Fr. Syll. VIII p. 728 var. nucleata 7427
   Rehm in Ber. Bayer. Bot. Gesellsch. XIII (1912) p. 125. Sporidiis plerumque grosse 2-, raro 1-guttulatis.

Hab. in foliis Hederae, prope Varone ad Benacum, Italia boreali.

- CAUSALIS Theissen, Ann. Mycol. 16., 1918, p. 184 (Etym. e kaúsalis seu vesicula carbonacea).— Clypeus epidermalis carbonaceus niger nitidus erumpens proeminens; stroma in mesophyllo efformatum album molle. Perithecia phyalaeformia parietibus pallidis mollibus donata, collo periphysato crustam attingentia. Ceterum ut in Pseudothis.— Typ. gen.:
- 1. Causalis Myrtacearum (Rick) Theiss., l. c., Pseudorhytisma Myrta-7428 cearum Rick, Syll. XXII p. 742.— An potius ad Valsaceas adscribendum?

#### Sect. 2. Phaeosporae

PHAEOPHACIDIUM P. Henn. et Lind. - Syll. XIV p. 814.

1. Phaeophacidium ahietinum Sacc., Nuovo Giorn. bot. it. v. XXVII, 7429 1920, p. 80.— Ascomatibus gregariis, innatis, erumpentibus sed non extantibus, disciformibus, 0,5-0,7 mm. diam., peridermio rupto et leviter elevato cinctis, nigris, subceraceis; ascis tereti-clavulatis, subsessilibus, 80-95 × 11, filiformi-paraphysatis, octosporis; sporidiis oblique monostichis ellipsoideis, 12-13 × 6, fuligineis.

Hab. in ramis corticatis, languidis Abietis grandis, Spokane, Washington, Amer. bor. (Shattuck). — Stictophaeidio et Phaeangio forte affine, sed revera est Phaeidium phaeosporum.

#### Sect. 3. Didymosporae

KEITHIA Sacc. - Syll. X p. 49, XXII p. 748.

1. Keithia thujina Durand, Mycologia 5., 1913, p. 9, t. 81 fig. 1 \*). — 7430 Ascomatibus epiphyllis, erumpentibus, orbicularibus v. ellipsoideis, pulvinatis, olivaceis v. brunneo olivaceis, 1-1,25 mm. longis, 0,5 mm. latis; epidermide supra integra non laciniatim decidenti; ascis clavatis, 80·100 × 18·20; sporidiis duobus, brunneo-olivascentibus, ellipsoideo-pyriformibus, septo ad apicem anteriorem inaequaliter divisis, punctatis, 22·25 × 15·16, paraphysibus furcatis, septatis, clavato-incrassatis, olivaceis.

Hab. in foliis vivis Thujae occidentalis, Mellen Wisc., Oconto Co., Amer. bor. (J. J. DAVIS).

FABRAEA Sacc. — Syll. VIII p. 735, X p. 50, XIV p. 815, XVIII p. 160, XXII p. 748.

1. Fabraea Sanguisorbae Jaap, Ann. Mycol. IX, 1911, p. 332.— Asco- 7431 matibus gregariis in maculis albicantibus hypophyllis insidentibus, rotundatis, depressis, disco flavidulo margine pallide brunneo, 0,2-0,4 mm. lato; contextu parenchymatico margine in cellulas elongatas producto; ascis clavatis, breviter pedicellatis, supra parum angustatis demumque rotundatis, 50-60 × 9-12, octosporis; jodi ope

<sup>\*)</sup> Cfr. Durand, The genus Keithia, in Mycol. 5., 1913 p. 6-11 et tab. 81. Monendum: Didymascella Oxycedri Sacc. et Maire = Keithia tetraspora (Ph. et Keith) Sacc. et Propolidium Tsugae (Farl.) Sacc. = Keithia Tsugae (Farl.) Durand, l. c.

poro cyanescente; sporis ellipsoideis, rotundatis, 9-10  $\approx$  4-5, hyalinis unilocularibus, biguttulatis, dein bilocularibus; paraphysibus filiformibus hyalinis, supra 3  $\mu$  cr.

Hab. in foliis vivis Sanguisorbae officinalis (Rosaceae), prope Münster Germaniae. — Fabr. Astrantiae (Ces.) Rehm proxima sed praecipue sporis minoribus diversa.

2. Fabraea succinea Rehm, Ann. Mycol. X, 1912, p. 397. — Ascomatibus in folii pagina late dealbata gregariis, primitus innatis, dein emergentibus, patellaribus, tenuiter marginatis, albo-flavescentibus, 0,15 mm. diam., glabris, parenchymatice flavidule contextis; ascis clavatis, apice rotundatis, 50-54 × 12, octosporis; sporis oblongis, rectis, triseptatis quaque cellula magniguttata, hyalinis, 15-20 × 5, distichis; J-; paraphysibus filiformibus, subramosis, 1,5 μ cr., hyalinis.

Hab. in pagina inferiore folii coriacei, Para Brasiliae (BAKER).

- NOTHODISCUS Sace., Notae Mycol. XXI p. 38 (N. G. bot. it. 1917) (Etym. nothos spurius, h. e discomyces spurius).—Ascomata minuta, subcutaneo-erumpentia, globoso-depressa, excipulo valde crasso, dense parenchymatico, nigro, initio clauso, dein orbiculariter minute aperto et discum infossum sordide albidum ostendente, margine integro. Asci parallele stipati, teretes, breves, subsessiles, aparaphysati sed strato mucoso tenui superne tecti, subtetraspori; sporidia monosticha ellipsoidea diu continua guttulata, dein plasmate bipartito obsolete (ex immaturitate?) bilocularia seu diblasta.
- Nothodiscus Antoniae Sacc., l. c. p. 39. Ascomatibus gregariis, 748 saepius epiphyllis, nigris, nitidulis, 240 μ diam., nucleo pallido 80 μ diam., excipulo nigro 60 μ crasso; ascis cylindraceis, 50-60 × 9-10, subtetrasporis; sporidiis ellipsoideis utrinque rotundatis, 15-16 × 7-8, initio pluri-globoso-guttulatis, dein diblastis, subinde medio lenissime constrictis, hyalinis (maturis?).

Hab. in foliis subvivis sed atratis Veronicae bellidioidis, Chanousia, Piccolo S. Bernardo, Italia bor. (Anton. Vanzetti Saccardo).

#### RHAGADOLOBIUM P. Henn. et Lind. - Syll. XIV p. 816.

Rhagadolobium bakerianum Saccardo, Notae Mycol. XX in Nuovo 7434
 Giorn. bot. it. 23., 1916, p. 206. — Ascomatibus hypophyllis hinc inde in soros subsuperficiales pulvinatos, 2-3 mm. diam., 5-7 congestis, totis nigris, initio depresse urceolatis subclausis, 200-350 μ

diam., dein margine eximie laciniato-dentato semper introrsus inflexo subdehiscentibus, coriacellis; excipuli contextu parenchymatico, rigidulo, cellulis pachydermaticis; ascis parallele stipatis, tereti-clavulatis, subsessilibus, apice subrotundatis, octosporis, 50-60  $\times$  14-15; paraphysibus bacillaribus, apice lobulato-capitellatis, capitulo nigricante 14  $\mu$  er.; sporidiis distichis, breviter fusoideis, utrinque obtusulis, 14-16  $\times$  4,7-5, subinde leviter curvis, 1-septatis, non constrictis, e roseolo hyalinis.

Hab. in frondibus languidis v. emortuis, C y a t h e a e, Mt. Maquiling, in Ins. Philipp. — A Rh. Hemilheliae dignoscitur ascomatibus in soros majusculos arcte junctis, paraphysibus apice lobulato-capitato nigro etc.

## Sect. 4. Hyalophragmiae

LEPTODOTHIORA v. Höhn., Ber. deutsch. bot. Ges. XXXVI, 1918, p. 311. — Est Dothiora ascis octosporis et sporidiis plerumque hyalophragmiis. — Typus gen.:

1. Leptodothiora elliptica (Fuck. ut Dothiora) v. Höhnel.

7435

#### Sect. 5. Hyalodictyae

KEISSLERINA F. Petrak, Ann. Mycol. 17., 1919, p. 74 (Etym. a Cl. D. K. von Keissler).—Stromata gregaria, effusa crassa non prominentia; asci polyspori incurvati. Quibus notis a gen. *Dothiora* tantum differt.

1. Keisslerina moravica F. Petrak, Ann. Mycol. 17., 1919, p. 74; Fl. 7436 Bohe. et Mor. exs. II Ser., Abt. 1., n. 1350. — Stromatibus circa ramulos longe lateque effusis, nigris; ascis crasse clavatis, 80-120 × 18-24, non paraphysatis, apice rotundatis, infra parum angustatis; sporis elongato-fusoideis v. subclavatis, 3-v. plerumque 5-septatis, septo medio constrictis demum unum septum long. praeditis, rectis v. curvulis, hyalinis, utrinque rotundatis, 15-24 × 4,5-7.

Hab. in ramulis siccis Evonymi europaei, ad rupes Mont. Surcow prope Mähr. Weisskirchen, nec non in Galizia, Europa media — Socia Dothichiza Evonymi Bub. et Kab. quae status conid. sistit.

#### Sect. 6. Scolecosporae

RHYTISMA Fr.— Syll. VIII p. 752, X p. 51, XI p. 433, XIV p. 817, XVI p. 790, XVIII p. 164, XXII p. 749.

1. Rhytisma acerinum (Pers.) Fr. — Sacc., Syll. VIII p. 753 — var. Da-74 sycarpi Rehm, Ascom. exsicc. fasc. 53 n. 367 b, Ann. Mycol. XI, 1913, p. 395.— Ascis cylindraceis apice obtuse acutatis, 150 × 80, octosporis; sporidiis anguste fusoideis utrinque fortiter acutatis, rectis, non septatis, 60-65 × 2,5, distichis; paraphysibus filiformibus, 1.5 u cr., supra hamatis.

Hab. in foliis Aceris dasycarpi (Aceraceae), London Ont., Canada, Amer. bor. (Dearness). — Quoad formas specificas biologicas huius speciei, cnfr. K. Müller, Ber. deutsch. bot. Ges. XXX, 1912, p. 387 et praecipue in Centralbl. f. Bakter. XXXVI, 1912, p. 67-98, tab. I-IV, ubi distinguuntur: Rh. acerinum f. sp. campestris K. Müll., Rh. acerinum f. sp. platanoides K. Müll., Rhytisma Pseudoplatani K. Müller.

2. Rhytisma himalense Syd. et Butl., Ann. Mycol. IX, 1911, p. 377.— 7488
Stromatibus in utraque foliorum pagina erumpenti-superficialibus sparsis rarius confluentibus, pulvinato-discoideis, 3-4 mm. diam., atro-nitidis, carbonaceis, intus pallidis, ex pluribus apotheciis constantibus; apotheciis elongatis, rectis vel curvatis, saepe interrupte concentricis rima distincta dehiscentibus; ascis anguste clavatis, deorsum longe attenuatis, 100-150 × 9-11, octosporis; paraphysibus copiosissimis, filiformibus, asco longioribus, guttulatis, simplicibus; sporidiis subdistichis, fusoideis, rectis, 1-septatis, non constrictis, saepe deorsum attenuatis, 17-22 × 2,5-4, hyalinis; stromatibus pycnidiis (Melasmiae sp.) simul praesentibus applanatis, atro-nitidis, 3-4 mm. diam., utraque pagina visibilibus, innatis, lenissime prominulis, tandem rimoso apertis; basidiis dense stipatis, parallelis, brevibus; sporulis ovatis v. ellipsoideis, continuis, hyalinis, 3 × 2.

Hab. in foliis Ilicis, verisimiliter I. dipyrenae (Aquifoliaceae), Ranikhet, Kumaon, Himalaya, Indiae or. (E. J. Butler). — Rhyt. Ilicis-latifoliae P. Henn. proxima sed situatione amphigena nec tantum hypophylla diversa.

3. Rhytisma Xylostei Naoumoff, Champ. Oural. I (1915) p. 23, t. I, 7439 f. 11 a. b. — Ascomatibus innatis, epiphyllis, maculiformibus, rotundatis v. secus nervos effusis, 5-12 mm. diam., atris, subnitentibus, tuberculato-lirelliformibus; ascis fusoideis v. clavatis, apice acuminatis,  $70-82 \times 8-10$ , octosporis, paraphysatis; sporidiis filiformibus,  $50-55 \times 2,7$ , guttulatis, hyalinis; paraphysibus filiformibus, 2,5  $\mu$  cr., hyalinis.

Hab. in foliis Lonicerae Xylostei (Caprifoliaceae), Perm, Ural, Rossia. — Dicitur stat. ascophorus Melasmiae Lonicerae. A Rhyt. lonicericola valde alienum.

COCCOMYCES De Not.— Syll. VIII p. 744, X p. 51, XI p. 432, XIV p. 818, XVI p. 789, XVIII p. 164, XXII p. 750.

1. Coccomyces vilis Syd. et Butl., Ann. Mycol. IX, 1911, p. 377. — 7440 Maculis amphigenis, irregularibus, venis limitatis, ½2 cm. longis, purpureo-marginatis; apotheciis hypophyllis, immersis, paucis in quaque macula, minutissimis, ½½½ mm. diam., circularibus, atris, depressis, rima irregulari dehiscentibus; ascis cylindraceo-clavatis, 70-96 × 5-6,5; paraphysibus filiformibus apice haud incrassatis, sporidiis octonis, filiformibus, hyalinis, ascos longitudine subaequantibus.

Hab. in foliis Mangiferae in dicae (Anacardiaceae), Malda, Indiae or. (E. J. Butler).

2. Coccomyces Canarii Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 7441 of Sci. VIII (1913) p. 403.— Ascomatibus in maculis foliorum plane exaridis, dilute luteolis, irregulariter circularibus, 0,3-2 cm. diam. sparsis, innatis, epiphyllis, discoideis, convexulis, nigre tectis, nitentibus, 0,3-0,5 mm. diam., primitus clausis dein, epiphyllo tegente laciniato, denudatis, patellaribus, hyalinis; ascis cylindraceis, 100  $_{\times}$  4, apice rotundatis, octosporis, J—; paraphysibus filiformibus, rectis, hyalinis, 1  $\mu$  cr.; sporidiis parallelis, filiformibus, tenuissimis, hyalinis, 0,05  $\mu$  cr.

Hab. in foliis Canarii (Burseraceae), Luzon Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

3. Coccomyces Ledi Rehm, Ann. Mycol. XI, 1913, p. 153.— Ascomatibus epidermidi late dealbatae sparsis innatis, orbicularibus, nigris, 0,2-0,25 mm. diam., lenticularibus, primitus clausis, subpapillulatis, dein apice poro simplici, demum 3-4 laciniis disrepto apertis, disco hyalino, excipulo tenuissimo, parenchymatice contexto; ascis clavatis, apice subacutatis,  $90 \times 10$ , octosporis; sporis filiformibus, rectis, simplicibus, hyalinis, -40 × 1,5, parallele positis, halone mucoso vix conspicuo obtectis; paraphysibus filiformibus, hyalinis, 2  $\mu$  cr.

Hab. ad ramulos vivos Ledi palustris (Ericaceae), Vesterbotten Sueciae (SYLVÉN).

4. Coccomyces filicicola Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 7443 Ciencias Cordoba, t. 23., 1919, Extr. p. 152. — Maculae difformes indeterminatae majusculae 5-10 mm. diam. albescentes, contra lucem inspectae pellucidae, amphigenae; cupulae parvae amphigenae

innato-superficiales, rotundatae v. vix angulosae atrae, 250-400  $\mu$ ; asci fusoidei inferne modice subtenuiterque pedicellati, dense crasseque pseudoparaphysati, 75-80  $\times$  10; sporae ascorum longitudine, filiformes utrinque acutae, pluriseptatae, hyalinae, 60  $\times$  1,5.

Hab. ad folia emortua putrescentia Pteridii? (Filices), prope Apiahy, Brasilia (J. PUIGGARI).

Coccomyces quadratus (Schm. et Kze) Karst. — Syll. VIII p. 746 — 7
 var. philippinus Rehm, Ascom. Philippin. VII, in Leafit. of Philipp.
 Bot. VIII, 1916, p. 2926. — Plane congruit imprimis epiphyllus, eximie quadratus, laciniis 4-apertus, 1-2 mm. latus.

Hab. ad folia emortua N e o l i t s e a e (Lauraceae), in cacumine Mt. Maquiling, Ins. Philippin. (C. F. BAKER).— var. Arctostaphyli Rehm in Ber. Bayer. Bot. Ges. XIII (1912) p. 130.— Ascis clavatis, 85-90 × 5-9; sporidiis acicularibus, sursum obtusis, deorsum acutis, continuis, multiguttulatis, 75-85 × 2,5-3.

Hab. in epiphyllo foliorum marcescentium Arctostaphyli Uvae-ursi (Ericaceae), Schynige Platte, Helvetia.

6. Coccomyces Memecyli Sydow, Ann. Mycol. XII, 1914, p. 570.— A-744 potheciis semper hypophyllis, maculis distinctissimis minutis orbicularibus 2-4 mm. diam. albis v. albido-ochraceis elevato-limitatis insidentibus, paucis (ca. 2-6 in quaque macula), innatis, irregulariter quadratis, rarius trigonis, ad angulos obtusis, atris, parum convexis, primo clausis, demum disenm pallide flavidum v. albidocinereum nudantibus, ca. 0,5 mm. diam.; ascis cylindraceis v. cylindraceo-clavatis, breviter stipitatis, 70-90 × 8-9,5, octosporis; paraphysibus 1-1,5 μ latis, ad apicem haud curvatis; sporidiis filiformibus, primitus continuis, dein indistincte pluricellularibus, rectis v. flexuosis, hyalinis, 45-60 × 1-1,5.

Hab. in foliis vivis v. subvivis Memeeyli lanceolati (Melastomataceae), Antipolo prov. Rizal, Ins. Philippin. (M. RAMOS).

7. Coccomyces Puiggarii Spegaz., Rel. mycol. trop. etc. in Bol. Ac. Nac. 7446 Cienc. Cordoba, t. 23, 1919, Extr. p. 152. — Maculae amphigenae arescenti-albae pellucidae determinatae, areola purpurascente cinctae; ascomata hypophylla 3-10 laxe gregaria saepius subcentralia; primo epidermide tecta dein erumpentia atra 3-5-gona; tenua, 300 450 μ diam.; asci e fusoideo subclavulati, apice obtusi crasseque tunicati, deorsum sensim in pedicello gracili subbreviusculo attenuati, paraphysibus filiformibus parum longioribus obvallati, 110-120 × 8-10; sporae fasciculatae filiformes utrinque acutae non v. pluriguttulatae, 60-75 × 2-2,5.

Hab. ad folia emortua non dejecta Mirtaceae, prope Apiahy, Brasilia (J. Puiggari).

8. Coccomyces dubius Rehm, Ascom. Philipp. in Leaflt. of Philipp. Bot. 7447 VIII, 1916, p. 2926. - Apothecia maculis hypophyllis nigris, 1-2 mm. latis plerumque solitaria, interdum bina innata, hemisphaerica, poro pertusa, non distincte explanata, glabra, 0,4 mm. lata; ascis fusiformibus, longe anguste stipitatis, 70 μ longis, parte sporifera 35-40 \* 10. 8-sporis; sporis fusiformibus, rectis, 1-3-septatis, hyalinis, 20 × 3, parallele juxtapositis, J -. Paraphyses filiformes, apice obtuse curvatae, 3 u circa, hyalinae.

Hab. ad folia Fici minahassae (Moraceae), Los Baños, Ins. Philipp. (S. A. Reyes). - Exemplaria imperfecte evoluta, apothecia denudata non praebent, potius Phyllachorae habitum, attamen hymenii structura fungum ad Phacidiaceas referendum cogitat.

9. Coccomyces Kerriae Stewart, Phytopath. VII (1917) p. 405, c. ic. - 7448 Ascomatibus hypophyllis vel amphigenis, sparsis vel subaggregatis, punctiformibus, ovatis, nigris, 100-220 μ latis, primum clausis dein per lacinias plures acutas dehiscentibus; disco griseo; ascis clavatis, apice leniter papillato, 55-74 × 11-13; paraphysibus filiformibus, simplicibus ant ramosis, septatis, apice tumido; sporidiis octonis, linearibus, leviter curvis, hyalinis, continus vel 1 septatis, 33.48 × 2.8.4. — Status conidicus: maculis numerosis, in ramulis foliisque, minutis, rubro-fuscis, 1-5 mm. latis, saepe confluentibus; acervulis solitariis, amphigenis, subepidermicis, disciformibus; conidiis filiformibus, flexuosis, hyalinis, 1-2-septatis,  $40.76 \approx 3,2-4,8$ , sporulis serotinis auctumnalibus, hyalinis, continuis, minutissimis, 2 \* 0.5 (Cylindrosporium Kerriae).

Hab. in foliis Kerriae japonicae (Rosaceae), cui noxius, in Amer. bor.

10. Coccomyces hiemalis Higgins, Science N. S. v. XXXVII, p. 638 7449 (1913); Amer. Journ. of Bot. v. I, p. 164 (1914), tab. XIV, XVI; Stewart, Cornell. Univ. Bull. n. 358, f. 73-74. - Ascomatibus sparsis interdum subaggregatis, punctiformibus, nigris, ovatis v. orbicularibus, primum clausis, deinde in lacinias plures acutas dehiscentibus; disco pallido carneo, 125-210 µ lat., aseis clavatis, crassiuscule stipitatis, 70-95 \* 11-14, octosporis, apice papillato; paraphysibus filiformibus, simplicibus aut ramosis, apice curvato; sporidiis linearibus,  $33.45 \times 2,5.3,5$ , simplicibus aut 1-3 septatis.

Hab. in pag. inferiore foliorum dejectorum Pruni avium, P. Cerasi, P. pennsylvanicae (Rosaceae), Ithaca N.

Y., Amer. bor. — Status conidicus *Cylindrosporium hiemalis* Higg.

11. Coccomyces lutescens Higgins, Amer. Journ. of Bot. v. I, n. 4, 745
p. 166 (1914), tab. XIV-XVI. — Ascomatibus hypophyllis, sparsis, subepidermicis, erumpentibus, disciformibus, 130-300 × 70-150, luteis v. ferrugineis, primum clausis deinde in lacinias plures acutas dehiscentibus; disco pallido carneo v. griseo; ascis clavatis, crassiuscule stipatis, 70-80 × 14-19, octosporis, apice papillato; paraphysibus filiformibus, simplicibus v. ramosis; sporidiis fasciculatis, linearibus, 35-50 × 3,5-4,5, simplicibus aut 1-3 septatis; conidiis in apotheciis, filiformibus, 50-80 × 2,5-4, uniseptatis.

Hab. in foliis dejectis Pruni serotinae, P. virginianae, Pr. mahalebi, Ithaca, N. Y., Amer. bor. — Status conidicus Cylindrosporium lutescens.

12. Coccomyces Prunophorae Higgins, Amer. Journ. of Bot. v. I, n. 4, 7451 p. 165 (1914), tab. XIV, XVI. — Ascomatibus hypophyllis, aggregatis v. sparsis, subepidermicis, erumpentibus, disciformibus v. subglobosis, 125-250 × 100-160, nigris, primum clausis deinde in lacinias plures acutas dehiscentibus; disco pallido griseo; ascis clavatis v. cylindraceo-clavatis, fere sporidiis completis 63-87 × 9-12, octosporis, apice papillato; paraphysibus filiformibus simplicibus aut ramosis, septatis; sporidiis fasciculatis, linearibus, 40-60 × 2,5-3,5, 1-3 septatis.

Hab. in foliis dejectis Pruni domesticae et Pr. insitiae, Ithaca N. Y., Amer. bor.—Status conidicus sistit Cylindrosporium Prunophorae.

13. Coccomyces coronatus (Schum.) De Not. — Syll. VIII p. 744 — fm. 7452 Rubi Rehm in Ber. Bayer. Bot. Ges. XIII (1912) p. 129. — Ascis clavatis, sursum obtuse attenuatis, 150 × 10 12; sporidiis distichis acicularibus, apice obtusis basi acutis, guttulis amplis oleosis repletis,? demum septatis, hyalinis, 35 × 2; paraphysibus filiformibus, apice uncinatis.

Hab. in caulibus putridis Rubi fruticosi (Rosaceae) in Jura (Herbar, Fuckel).

**CLITHRIS** Fr. — Syll. II p. 803, IX p. 1027 (Colpoma), XVIII p. 165, XXII p. 751.

1. Clithris Callunae (Rehm) Saccardo, Colpoma (Sporomeya) Callunae 7453 Rehm, Ber. Bayer. Bot. Gesell. XIII (1912) p. 136. — Ascomatibus sparsis, initio clausis, immersis, epidermidem pustulatim inflantibus, dein laciniatim vel rimose apertis, disco plano luteolo, atro-

marginato, 0,5 mm. diam.; ascis clavatis, apice obtuse attenuatis, circ.  $120 \times 10$ ; paraphysibus filiformibus, septatis, hyalinis, 2,5  $\mu$  er. obvallatis; sporidis parallele fasciculatis, acicularibus, apice obtusis, basi attenuatis, rectis, hyalinis, continuis, circ.  $40 \times 1,5$ .

Hab. in ramulis Callunae vulgaris (Ericaceae), prope Weismain in Franconia.

2. Clithris Clusiae L. R. Tehon, Bot. Gazette 65., 1918, p. 554, tab. 7454 IX fig. 1-4. — Maculis 0,5-2 cm. diam. e pallidis flavis; ascomatibus obscuris, subepidermicis dein longitudinaliter erumpentibus 950 × 468; paraphysibus filiformibus, numerosis, supra in epithecium pallide flavum coalescentibus; ascis elongatis anguste subcylindraceis, 150 × 7-8, octosporis; sporidiis filiformibus, 150 × 1, maturis disrumpentibus, e pallide fumosis pallide brunneis.

Hab. in foliis dejectis Clusiae roseae (Guttiferae), Desecheo Island, Amer. bor.

3. Clithris minor L.R., Tehon, Bot. Gazette 65., 1918, p. 554, tab. IX 7455 fig. 5. — Maculis e pallidis flavescentibus, 0,5-2 cm. diam.; ascomatibus obscuris minutis,  $624 \times 220$ ; paraphysibus numerosis filiformibus hyalinis, et vix supra ascos in epithecium tenuem hyalinum coalescentibus; ascis elongatis angustis,  $110 \times 7$ , octosporis; sporidiis filiformibus  $110 \times 1$ , maturis disrumpentibus, pallide fumosis.

Hab. in foliis Clusiae roseae (Guttiferae), Disecho Island, America bor.

4. Clithris Pandani L. R. Tehon, Bot. Gazette, 65., 1918, p. 555, tab. 7456 IX fig. 6-7.— Maculis e pallidis flavescentibus, 0,25-6 cm. diam.; ascomatibus parvis obscuris subepidermicis dein erumpentibus, 570 × 110; paraphysibus numerosis, ascos superantibus et supra epithecium pallide flavescentem efformantibus; ascis elongatis angustis, 91 × 7, octosporis; sporidiis filiformibus, 91 × 1, maturis disrumpentibus, pallide fumosis.

Hab. in foliis dejectis Pandani culti (Pandanaceae), San Juan, Amer. bor.

## Fam. 17. Patellariaceae Fr.

#### Sect. 1. Hyalosporae

**PSEUDOPHACIDIUM** Karst. — Syll. VIII p. 776, XIV p. 818, XVI p. 791, XVIII p. 169, XXII p. 753.

PATINELLA Sacc. — Syll. VIII p. 769, X p. 52, XI p. 433, XIV p. 818, XVI p. 791, XVIII p. 165, XXII p. 752.

1. Patinella brenckleana Sace., Mycologia, 12., 1920, p. 203. — Asco-7458 matibus gregariis, subsuperficialibus, scutellatis, applanatis 0,7-1 mm. diam., nigris, glabris, margine rectiusculo, acuto, disco plano intus flavido, epithecio vero grumoso, atro-fulvo; ascis tereti-clavatis, apice rotundatis, deorsum sensim tenuato-stipitatis, 70 × 11-12, octosporis; sporidiis distichis, fusoideis, saepe leniter curvis, utrinque obtusatis, dilutissime flavidis, farctis; paraphysibus filiformibus, hyalinis.

Hab. in cortice A melanchier is alnifoliae, Whitestone Gully, N. D., Amer. bor. — Affinis P. inquinanti a qua differt ascomate 1 mm. lato, disco plano, sporidis paullo minoribus, paraphysibus aequalibus.

ODONTOSCHIZON Sydow, Ann. Mycol. XII, 1914, p. 568 (Etym. odontos dens, et schizo findo). — Ascomata omnino superficialia, discreta, initio clausa, dein ore dentato dehiscentia, nuda atra, ubique parenchymatice contexta. Asci ellipsoidei, saccati usque clavati, octospori. Paraphyses superne leniter coloratae et epithecium formantes. Sporidia continua, hyalina, ellipsoidea.

1. Odontoschizon parvulum Sydow, l. c. p. 568.— Ascomatibus omnino 7459 superficialibus, epiphyllis, sparsis, minutis, punctiformibus, 200-400  $\mu$  diam., 175-275  $\mu$  altis, lata basi sessilibus, applanato-globulosis

usque semiglobosis, initio clausis, dein ore dentato deliscentibus, postremo ut videtur urceolato-cupulatis, atris, glabris, levibus, ubique parenchymatice contextis (cellulis 8-12  $\mu$  diam.), in sicco duris; ascis primo ellipsoideis, dein saccatis usque saccato-clavulatis, superne rotundatis et leniter incrassatis,  $70\text{-}120 \approx 25\text{-}45$ , octosporis; paraphysibus ascos longe superantibus, superne leniter dilatatis et brunneolis, epithecium formantibus, 2-2,5  $\mu$  latis; sporidiis distichis v. oblique monostichis, ellipsoideis, continuis, rotundatis, hyalinis,  $18\text{-}23 \approx 11\text{-}15$ .

Hab. in foliis Quercus ovalis, Angat prov. Bulacan, Luzon, Ins. Philippin. (M. RAMOS).

#### NESOLECHIA A. Mass. - Syll. X p. 53, XVIII p. 170.

1. Nesolechia cerasina Müll. Arg. in Durand et Pitt., Prim. Fl. Costar. 1 7460 p. 72; Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 416.— Ascomatibus superficialibus, primum leniter concavis, dein planis, immarginatis, nigris, circularibus v. leniter angulosis, 333-500 μ circ. diam.; contextu brunneo-cerasino sub microscopio; ascis angustis, tunica apice incrassata, 4-8 sporis; paraphysibus crassis agglutinatis; sporidiis submonostichis, sphaeroideis, v. sphaeroideo-ellipsoideis, 7-9 × 6-7,5; hymenio toto brunneo-cerasino.

Hab. in thallo Physciae pictae var. Sorodiellae, ad cortices vivos, prope San Josè, Costa Rica.

2. Nesolechia scabridula (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de Fr. 7461 1913, p. 408, Lecidea (v. Lecidella) scabridula Müller Arg., Lichens de Granges rec. par Wolf, p. 8.— Apotheciis emergentibus, mox emergenti-superficialibus, eis L. supersparsae Nyl. simillibus, margine tantum crassiore et magis elevato, rugosis, nigro-brunneis, udis submollibus; ascis anguste cylindraceis, octosporis; paraphysibus minutis, facile separantibus; sporidiis oblongo-ellipsoideis, hyalinis, simplicibus, 9-11 × 3-4; epithecio brunneo, thecio hyalino, hypothecio hyalino, basi brunneo.

Hab. in thallo Placodii nodulosi, prope Granges Valais medio, Helvetiae (Wolf).— N. cladoniariae et N. oxysporellae peraffinis.

3. Nesolechia Halacsyi Steiner, Prodr. Flechtenfl. Griech. Festl. p. 155.— 7462 Ascomatibus sparsis v. aggregatis, emergentibus, parum convexis et immarginatis, sordide brunnec-nigris, 400 µ diam.; excipulo intus nigro, brunnec-violaceum v. brunnec-viridem nutante; ascis clavatis, tunica supra mediocriter incrassata, octosporis; paraphysi-

bus filiformibus, varie incurvatis et contextis, septatis, ramosis, laxiusculis, sursum mediocriter inflatis; sporidiis varie ellipsoideis rectis v. curvulis, hyalinis, simplicibus, 8-16 × 4-6; epithecio nigro ad brunneo-violaceum v. brunneo-viridem vergenti; thecio subhyalino, plus minus flavo-aurantiaco tineto, hypothecio hyalino v. flavo-aurantiaco v. brunneo-violaceo.

Hab. in thallo Rhizocarpi geographici, Cyllene (HALACSY), Oeta (NIDER), Graecia. — N. verrucariae affinis.

4. Nesolechia Coccocarpiae Müller Arg., Lich. Beitr. XXVI in Flora 7463 1887, p. 397. — Ascomatibus nigris v. obscure nigro-brunneis, 250-333 μ diam., crassiusculis, emergenti-superficialibus demum disco plano immarginato praeditis; ascis octosporis; paraphysibus crassiusculis; sporidiis distichis, ellipsoideo-fusoideis, utrinque obtuse angustatis, hyalinis, simplicibus, 13-15 × 4-5; epithecio nigro-olivaceo; thecio et hypothecio hyalinis.

Hab. in thallo Coccocarpiae aurantiacae, Russell River, Australia or. (W. SAYER).— A N. imponentis colore tantum diversa et N. oxysporizae magnitudine sporidiorum.

5. Nesolechia perforans (Stitzb.) Vouaux, Bull. Soc. Mycol. de Fr. 1913, 7464 p. 406, Lecidea perforans Stitzenb., Lichen. Afr. p. 192. — Ascomatibus gregariis, erumpentibus, anulo thallino circinnante crenulato circumdatis et tunc habitu Lecanoroideo, immarginatis, intus extusque nigris, 200-400 μ diam.; ascis globulosis, octosporis; paraphysibus agglutinatis; sporidiis late ellipsoideis, simplicibus, hyalinis, 7-11 × 5-6; epithecio brunneo, hypothecio brunneo-nigro.

Hab. in thallo Parmeliae perforatae, Transvaal Africae austr. (MAC LEA). — Nes. thallico!ae proxima.

6. Nesolechia oxysporiza Steiner, Prodr. Flechtenfl. Griech. Festl. p. 7465 156. — Vouaux, Bull. Soc. Mycol. de Fr. 1913 p. 412. — Ascomatibus primum immersis dein emergentibus demumque superficialibus, primum margine tenui praeditis dein mox parum convexulis et immarginatis, nigris, opacis, circularibus, 350 μ diam.; excipulo brunneo-purpureo v. brunneo-violaceo; ascis clavatis, tunica apice parum incrassata, octosporis, 40-50 × 18; paraphysibus agglutinatis, basi irregularibus, supra regulariter filiformibus, septatis et apice parum inflatis; sporidiis ellipsoideis utrinque acutis, hyalinis, simplicibus, 14-17 × 5-6; epithecio obscure cyaneo-viridi; thecio plus v. minus pallide cyaneo-virescenti; hypothecio incoloro v. vix flavidulo. J. ope hypothecio flavo, thecio sordide violaceo, ascis sordide vinosis.

Hab. in thallo Lecanorae polytropae, Godanam, Graecia (NIDER). — N. imponentis et supersparsae valde affinis.

7. Nesolechia diversispora Grelet, Notes Mycologiques, in Le Monde 7466 des Plantes, XVIII, 1917, n. 107, p. 51, cum icon.— Receptacula sparsa vel gregaria, crumpenti-superficialia, sessilia, ceraceo-coriacea, 300-500 μ diam., nigra, rarius castaneo-vel olivaceo-nigra, primo depressula vel subconcava, margine crasso prominente, dein applanata, subconvexula, disciformia, disco tenuiter ruguloso; thecae late clavatae, apice rotundatae et incrassatae, basi attenuatae, 8-sporae, rarius 4-6-sporae, 45-65 × 18-25; paraphyses copiosissimae, simplices vel ad basim divisae, septatae, obtusae, ad apicem non aut vix incrassatae, lineares, nodulosae vel ramulosae, 2-3 μ crassae, hyalinae; sporae subdistichae vel inordinatae

Hab. hieme ad thallum Lecanora e cujusdam, in ligno pineo v. abietino fabrefacto, Savigné, Vienne, Gallia. — Hymenium jodi ope intense caerulescit.

8. Nesolechia frigidella (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 1913, 7467 p. 414, Lecidea frigidella Nylander, Flora 1868, p. 473.— Ascomatibus convexis, rugulosis, immarginatis, udis rubridis, siccis brunneis, 0,3-0,5 mm. diam.; ascis piriformiter ventricosis, octosporis; paraphysibus fortiter agglutinatis; sporidiis ellipsoideis, hyalinis simplicibus, 18-23 × 11-12; epithecio fulvo-cyaneo submetallico, hypothecio concolori.

Hab. in thallo vetusto indeterminabili, Laponia, Europa bor. (NORRLIN).

DISCOCERA A. L. Smith et J. Ramsb., Trans. Br. Myc. Soc. VI p. 48 (1917).— (Etym. discos et cera). — Ascomata parasitica, sessilia, immarginata, colorata, firma ceracea; disco potellato dein plano-convexo. Asci clavati supra rotundati, inoperculati, S-spori; paraphyses tenerae supra ramosissimae epithecium densum formantes; sporidia ellipsoidea, continua, hyalina.— Sporidiis majusculis ad Humariam accedit, sed ascis inoperculatis et epithecio Nesolechiae affine genus videtur.

1. Discocera lichenicola A. L. Sm. et Ramsb., l. c.— Ascomatibus subrotundis, ad 1,5 mm. lat., fusco-coccineis, glabris; ascis elongato-clavatis  $140 \times 20$ , membrana  $12~\mu$  cr., jodi ope vinoso-rubescentibus; paraphysibus tenerrimis,  $1~\mu$  cr., septatis, supra saepissime ramosis, interdum irregulariter nodosis, hyalinis, guttulatis, granulosis ad basim coalitis; sporidiis levibus, intus roseo-hyalinis,

guttulatis, 20-26 \* 10-13.

Hab. ad thallum Lichenum supra saxa, Treborough, Somerset Britanniae (W. WATSON).

#### RHYMBOCARPUS Zopf. - Syll. XIV p. 819.

1. Rhymbocarpus Geographici (Steiner) Vouaux, Bull. Soc. Mycol. de 7469 Fr. 1913, p. 419, Nesolechia Geographici Stein., Beitr. Lich. Griech. und Egypt. etc. p. 161.—Ascomatibus gregariis, minutissimis, 0,1-0,15 mm. diam.; ascis cylindraceis v. subcylindraceis, octosporis; paraphysibus filiformibus connatis; sporidiis oblique monostichis rhomboideis v. fusoideis, utrinque acutis, hyalinis, simplicibus, 9-11 × 3,4-4; epithecio obscure viridi v. olivaceo, hypothecio incolori. . Hab. in thallo R h i z o c a r p i g e o g r a p h i c i, in M. Penthelico, Graecia (STEINER).—Rhiz. punctiformi Zopf valde affinis et verisimiliter synonimus, sed species Steineri anterior.

BIATORELLA De Not. - Syll. VIII p. 469, X p. 23, XIV p. 31 et 820.

Biatorella elegans (Zwackh) Rehm, Discom. p. 305; Sacc., Syll. XX 7470
 p. 1194, Biatora elegans Zwackh, Lich. exs. n. 344.

Hab. in corticibus Robiniae, Ulmi, Tiliae, Fraxini, in Europa — Observante ipso cl. Rehm l. c., potius Lichenis species, aeque ac Biatorina sublutea Rehm, Ascom. Philipp. III in Philipp. Journ. of Sc. VIII (1913) p. 404.

TROMERA Mass. — Syll. VIII p. 469. — Syn., sec. Cl. Maire, Comesia Sacc., Syll. VIII p. 468.

Tromera fossarum (Duf.) R. Maire, Bull. Soc. Hist. Nat. Afrique 7471 du Nord, IX, 1918, p. 18, Lecidea fossarum Duf., Fl. Lichen. Europ. 1831, p. 264, Biatorella fossarum (Duf.) Rehm (ut Lichen). — Secundum Cl. R. Maire, huc pertinet Comesia guttata R. Maire, Myc. bor. afr. fasc. III n. 297 (1917).

#### Sect. 2. Phaeosporae

LAGERHEIMA Sace. - Syll. X p. 55, XXII p. 754.

1. Lagerheima dermatoidea Rehm, Ascom. Philippin. VII, in Leafit. 7472 of Philipp. Bot. VIII, 1916, p. 2928. — Apothecia in caespitulis 2-3 mm. latis connata, primitus innata, 2-3 arcte congregata, dein erumpentia, atra, glabra, patellaria, crasse marginata, versus basim elongata, 0,3-1 mm. diam., parenchymatice ex cellulis longitu-

dinalibus fuscis parenchymatice contexta, crasse dermatoidea, sicca corrugata; ascis clavatis, apice rotundatis, crasse tunicatis, 80-90  $\,$  12, 8-sporis, J-; sporis ellipsoideis, 1-cellularibus, haud guttatis, subfuscis, 12-15  $\,$  7-8, 1-2-stichis. Paraphyses epithecium fuscum formantes, non discretae.

Hab. ad ramum emortuum Derris philippinensis, Los Baños, Ins. Philipp. (C. F. BAKER).

2. Lagerheima carbonicola Torrend, Champ. Congo belge, Bull. Jard. 7473 Bot. Bruxelles IV, 1 (1913) p. 29. — Sparsa vel gregaria, atro-cinerea, 1/2 · 3 mm. lata, in sicco margine involuto; ascis tereti-clavatis, 90-120 × 6-9, subhyalinis vel dilute lateritiis, in acervo brunneo-lateritiis; paraphysibus linearibus; sporidiis monostichis ellipsoideis vel obovatis, large ocellatis, 10-12 × 5-6, dilute fuligineis vel olivaceis.

Hab. ad ligna deusta, Kisantu, Congo (H. VANDERYST). — L. pilosae Syd. proxima, cujus forte est forma glabra.

#### Sect. 3. Didymosporae

PATELLEA Fr. — Syll. VIII p. 783, XIV p. 820, XVIII p. 173, XXII p. 755.

1. Patellea oreophila Ch. E. Fairman, Mycologia 10., 1918, p. 253.— 7474 Ascomatibus sessilibus, sparsis, primum ligno fibrilloso immersis v. limitatis dein erumpenti-superficialibus, lecideiformibus, tenuiter marginatis, nigris, 0,5-1 mm. diam.; ascis clavato-cylindraceis, apice rotundatis breviter stipitatis, octosporis, 60-80 × 10-12, jod. ope —; paraphysibus numerosis filiformibus vix 1-1,5 μ cr. simplicibus raro ramosis, undulato-flexuosis, apice non expansis; sporidiis biseriatis, fusoideis demum falcato-sigmoideis, apicibus subacutis, sub medio uniseptatis non constrictis, e hyalinis pallide virentibus, 27-30 × 4-7; excipulo brunneo.

Hab. in ramis vetustis decorticatis Symphoricarpi or eophili, Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY). — Gonidiis lichenum nullis.

2. Patellea californica Rehm, Ascomyc. Exsice. fasc. 49 n. 1960, Ann. 7475 Mycol. X, 1912, p. 55.— Apotheciis in ligno late fuscato gregarie sessilibus, primitus globoso-clausis, dein patellaribus, tenuissime marginatis, demum lecideiformiter explanatis, disco subconvexulis, nigris, ceraceis, 0,2-0,5 mm., glabris, excipulo parenchymatico, fusco, crasso; ascis clavatis, apice rotundatis, 80-90 × 7-9, J—, octosporis;

sporis cylindraceis, rectis v. subcurvatis, utrinque obtusis, medio septatis, non constrictis, hyalinis,  $10\cdot12*2.5$ , distichis: paraphysibus filiformibus,  $1.5~\mu$ , apice clavatis,  $3\cdot4~\mu$  cr., fusco-violaceis, epithecium formantibus; hypothecio dilute fuscidulo.

Hab. in Adenostomate fasciculato emortuo, prope Clermont California, Amer. bor. (C. F. BAKER).

- PACHYPATELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 228 et 668.— Ascomata erumpenti superficialia, solitaria v. caespitose aggregata, irregularia, rotundata usque oblonga v. lobata, atra. crassa, primitus globosa, dein discum planum marginatum denudantia, ceraceo-cornea. Asci octospori, parce paraphysati. Sporidia phaeodidyma. Epithecium fuscum.
- 1. Pachypatella Alsophilae (Rac.) Th. et Syd., 1. c., Hysterostomella Al- 7476 sophilae Rac., Syll. XVI p. 656.— Syn. Discodothis lobata Syd., Philipp. Journ. of Sc., C. Bot. 1913, VIII n. 6, p. 495 cum icon.

KARSCHIA Körb. — Syll. VIII p. 779, X p. 56, XI p. 434, XIV p. 820, XVI p. 792, XVIII p. 176, XXII p. 755.

Subg. Eu-Karschia Sacc. 1905, Syll. XVIII p. 176

1. Karschia andicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos 7477 Aires XXIII (1912) p. 103. — Ascomatibus laxe gregariis, orbicularibus, 300-500 μ diam., glabris, margine acutis saepius denticulatis, extus nigris, disco atro-olivaceo, contextu opaco indistincto; ascis clavatis, apice crasse tunicatis, breviter crasseque pedicellatis, 55-60 × 16-20, paraphysibus filiformibus, longioribus, apice incrassato-corrugatis, nigricantibus coalescentibusque cinctis, octosporis; sporidiis di-tri-stichis, subellipsoideis, medio septatis, non constrictis, fuligineis, 16-20 × 7-8, loculis aequilongis, supero semper nonnihil crassiore saepius grosse 1-guttulatis.

 $\it Hab.$  in ramis dejectis putrescentibus, decorticatis, sordide cinerascentibus  $\it Prosopidis alpataco$ , circa Potrerillos prope Mendoza, Argentina.

Subg. Karschiella Sacc. 1905, Syll. XVIII p. 177 (= Epilichen F. E. Clements, Genera of Fungi 1909, p. 69, 174).

Karschia brachyspora (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de Fr. 7478
 1913, p. 460, Lecidea brachyspora Müll. Arg., Proc. Roy. Soc. Ed.
 1881-1882 p. 464. — Ascomatibus superficialibus, plano-subdepres-

sis. margine elevato et nitido, disco plano, nudo opaco; nigris, 0,25-0,33 mm. diam.; ascis plerumque esasporis; sporidiis 7-9 × 4.5-6.5; epithecio brunneo, thecio hyalino, hypothecio supra hyalino, coeterum nigro-brunneo.

Hab. in thallo Buelliae innatae (Lichenes), Socotoro, Africa or. (Schweinfurth). - K. leptolepis proxima.

- 3. Karschia Sordiola Steiner, Prodr. Flecht. Griech. p. 162, Vouaux 7479 Bull. Soc. Mycol. de Fr., 1913, p. 459. - Ascomatibus primum solitariis, dein mox emergentibus et 2-14 gregariis maculas parvas nigras suborbiculares efformantibus; thallo matrici parum mutato; disco plano verruculoso; margine primum crasso, dein tenui sed persistenti, opacis, nigris, circularibus, 0,4 mm. diam. et ultra; ascis claviformibus, tunica supra mediocriter incrassata, octosporis, 50-58 × 16-20; paraphysibus filiformibus, apice inflatis et septatis subcollabescentibus; sporidiis ellipsoideis primum hyalinis dein brunnescentibus demum obscure brunneis, 1-septato-constrictulis, 10-13 × 6-8; epithecio nigro-brunneo; thecio hyalino, hypothecio subhyalino demum brunneo-pallido.
- Hab. in thallo Lecanorae sordidae, Graecia (NIDER). 4. Karschia linitaria Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 449. — 7480 Ascomatibus gregariis, superficialibus, primum sphaeroideis et punctiformibus demum late apertis, margine crasso et integro praeditis, nigris, circularibus, 140-260 µ diam.; excipulo brunneo, pseudoparenchymatico e cellulis confertissimis 6-8 \mu cr. constituto; ascis clavatis, breviter pedicellatis, apice late rotundatis, tunica tenui praeditis, octosporis, 50-52 × 10-12; paraphysibus parum septatis et ramosis, filiformibus, 1 µ cr., cellula irregulariter inflata castanea 3 µ cr. terminatis; sporidiis distichis ovoideo-elongatis, utringue rotundatis, brunneis, uniseptato-constrictulis, loculo inferiori saepe breviori, 10-13,5 \* 4-5; epithecio castaneo, thecio hyalino v. pallide flavido-fulvo, hypothecio castaneo.

Hab. in thallo Lobariae linitae, Mereya in Sagalien (ABBÉ FAURIE).

5. Karschia Glomelliferae (Harmand) Vouaux, Bull. Soc. Mycol. de Fr. 7481 1913, p. 446, Lecidea Glomelliferae Harmand, Cat. Lich. Lorr. p. 427. — Ascomatibus sparsis, primum immersis et punctiformibus demum subsuperficialibus, disco diu plano parum zigrinato dein convexo, opaco, margine parum lucido subpersistente, regulariter circularibus, nigris, 1 mm. et ultra latis sed plerumque 0,3-0,6 mm. latis; excipulo crassiusculo, brunneo, pseudoparenchyma-

tico è cellulis polygoniis basi 4-5  $\mu$  cr. supra 5-8  $\mu$ , margine parum elongatis; ascis elavatis, breviter pedicellatis, supra late rotundatis ibique tunica crassiori praeditis, octosporis,  $50\text{-}60 \times 14\text{-}18$ ; paraphysibus agglutinatis septatis, supra ramosis,  $1.5\cdot 1.75$   $\mu$  cr., apice cellula ovoideo-subclavata brunnea terminatis,  $2.5\cdot 5$   $\mu$  cr., sporidiis subdistichis, utrinque late rotundatis, brunneis, 1-septatis constrictulis v. non, loculo inferiori saepe parum angustiori,  $9\cdot 14\times 6\cdot 8$  (Harmand:  $8\cdot 13.6\times 6.6\cdot 8.5$ ); epithecio brunneo, thecio hyalino; hypothecio brunneo-nigrescenti versus basim ascorum leniter olivaceo tineto.

Hab. in thallo Parmeliae glomelliferae, Docelles in Vogesibus (CLAUDEL et HARMAND).

6. Karschia Pertusariae Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 7482 453. — Ascomatibus sparsis, satis numerosis, mox superficialibus; primum et diu margine crasso elevato et tune subperitheciiformibus, demum disco plano et margine crasso et regulari praeditis, circularibus, nigris, 150-240 μ diam.; excipulo obscure brunneo, crasso, pseudoparenchymatico e cellulis confertis polygoniis 4 μ circ. cr. margine parum longioribus constituto; ascis clavatis pedicello longiusculo nodoso praeditis, apice rotundatis et tunica crassiori donatis, octosporis, raro esasporis v. pentasporis, 46-50 × 11-13; paraphysibus septatis, praecipue ad apicem, ramosis, 1-1,5 μ cr., cellula clavata brunnea 2-3 μ terminatis; sporidiis distichis ovoideis v. ellipsoideo-oblongis, utrinque late rotundatis, raro inaequilateralibus, brunneis, 1-septato-constrictulis, loculo inferiori parum angustiori, 12-14 × 5-6,5; epithecio brunneo, thecio et hypothecio flavidis v. hyalinis.

Hab. in thallo Pertusariae (Lichenes), Cerro Azul (2000 m. alt.), Morèlia, prope Mexico (BROUARD).— K. talcophilae et Bayer-hofferi proxima

7. Karschia talcophila Ach. — Syll. VIII p. 782 — var. irregularis 7483 Vouaux, Bull. Soc. Bot. Fr. LVIII (1911) Mem. 22, p. 69. — A typo differt figura ascomatum, primum globosa atque occlusa dein valde irregularis disco vix detecto, nec non mensura sporidiorum, 20-25 × 7-10.

Hub. parasitica in thallo Pertusariae albescentis, ad truncos Sabinae in ins. Canar.

8. Karschia Ricasoliae Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 448.— 7484
Ascomatibus sparsis, primum punctiformibus et parum immersis
mox superficialibus et urceolatis, dein planis et tenuiter revolutis

demum immarginatis, sed planis v. tantum leniter convexulis, nigris, regulariter circularibus, 0,5-0,4 mm. diam.; excipulo obscure brunneo rubrido tincto, crasso, pseudoparenchymatico e cellulis basi latioribus et pallidioribus ibique usque ad 14 u latis, margine minoribus confertioribus obscurioribusque ibique 5-6 µ cr.; ascis clavatis breviter v. longiuscule crasseque pedicellatis, apice late rotundatis, membrana praecipue ad apicem crassiori, octosporis, 46-64 \* 10-14; paraphysibus agglutinatis, parum septatis, basi ramosis, 1 \mu er., apice irregulariter incrassatis, 2,5-4 \mu, fulvis; sporidiis subdistichis, cylindraceis v. clavulatis, utrinque rotundatis, rectis v. curvulis, primum simplicibus hyalinis, dein coloratis, demum brunneis et bilocularibus, septo non v. parum constrictis, loculo inferiori saepe augustiori, 12·17 × 3·5; epithecio et hypothecio brunneo-fulvo v. brunneo-rubrido; thecio hyalino.

Hab. in thallo Ricasoliae, Campanario et Cerro Azul (2-2,300 mm. alt.), prope Morélia, Mexico (BROUARD).

9. Karschia crassaria Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 456.- 7485 Ascomatibus 2-5 aggregatis, raro solitariis, primum immersis et punctiformibus dein emergentibus et tenuiter marginatis, demum fere superficialibus, valde convexis et immarginatis, subcircularibus, nigris, 0,1.0,2 mm. diam.; excipulo tenui, brunneo, pseudoparenchymatico e cellulis polyedricis parvis 3.4 μ cr. efformato; ascis clavatis breviter crasseque pedicellatis, apice late rotundatis, tunica apice valde incrassata, octosporis, 46.50 × 16-20; paraphysibus agglutinatis, septatis, apice multo ramosis 1 \mu cr., cellulis 1 v. 2 rotundatis ultima brunnea, 4-6 µ cr., terminatis; sporidiis inordinatis, oblongis, utrinque late rotundatis, rectis v. curvulis, brunneis, 1-septatis non constrictis, plerumque 2-guttulatis, 13-16 \* 4,5-6; epithecio et hypothecio obscure brunneo; thecio hyalino.

Hab. in thallo Squamariae crassae, Birin, Algeria merid. (Seurat). — K. tegularum, pulverulentae, epiconcolori proxima.

10. Karschia episemoides (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 1913, 7486 p. 462, Lecidea episemoides Nyl., Lich. Angol. Welw. p. 10. - Ascomatibus convexis immarginatis, quandoque planis et margine vix visibili, intus extusque nigris, 0,2-0,3 mm. diam.; excipulo rubrocerasino, basi nigrescente; ascis cylindraceis v. cylindraceo-attenuatis, 8-sporis, 10-11 µ latis; paraphysibus agglutinatis; sporidiis monostichis, ellipsoideis v. oblongis, brunneis, uniseptatis, septo quandoque inconspicuo, 12-14 > 5-7; thecio rubro-cerasino, epithecio parum obscuriori v. subconcolori, hypothecio anguste brunnescenti.

Hab. in thallo Tremotylii angolensis, Angola (Welwitsch).

11. Karschia anziana (Rehm) Vouaux, Bull. Soc. Mycol. de Fr., 1913, 7487 p. 455, K. talcophila var. anziana Rehm in Rabh., Cr. Fl. Pilze III, Discom. p. 356. — A talcophila recedit hypothecio flavido (v. castaneo-brunneo), ascis 80 × 18-20 (v. 66-73 × 18-23), sporidiis 15-20 × 7-9 (v. 16-20 × 8-10).

Hab. in thallo Urceolariae scruposae var. gypsaceae (Lichenes), St. Pons, Herault, Gallia (A. DE CROZALS).—
K. pulverulentae affinis.

#### RAVENELULA Speg. - Syll. VIII p. 782.

1. Ravenelula boliviensis Spegazz., An. Soc. Cient. Argentina, t. 90., 748 1920, p. 28. — Ascomatibus sparsis v. laxe gregariis, ligno denudato insidentibus fere hemisphaericis, minutis coriacellis, 250-300 μ diam., apothecio sordide fusco disco atro-olivascente, glabris levibus; ascis obovatis v. obovato-clavatis, antice obtuse rotundatis crasseque tunicatis, postice sensim cuneatis ac in pedicello brevi attenuatis, 50-55 × 15-18, 24-32-sporis, paraphysibus subfiliformibus densis longioribus apice incrassatis et fusco nodulosis obvallatis; sporidiis parvis 3-4-stichis, ellipsoideis, utrinque obtusis, medio 1-septatis non constrictis, loculis 1-guttulatis, levibus fuligineis, 10-12 × 4; contextu apothecii, ascorum membrana nec non paraphysibus, jodi ope intense coerulescenti; gonidiis non inventis.

Hab. in foliis Erythroxyli Cocae, Bolivia, Amer. austr.

MELASPILEA Nyl.— Syll. X p. 58, XVI p. 793, XVIII p. 179.— Syn. Pleospilis F. E. Clements, Genera of Fungi 1909, p. 69, 174 (= Spilomela Sacc. 1905, Syll. XVIII p. 179).

1. Melaspilea epigena Müll. Arg., Lich. Parag. p. 20; Vouaux, Bull. 7489 Soc. Mycol. de Fr., 1913, p. 472. — Ascomatibus sparsis v. gregariis, superficialibus, lirelliformibus, oblongo-ellipsoideis v. fusoideis, plerumque utrinque acutis, disco primum clauso dein late aperto et plano, nigris, 0,2 mm. lat.; excipulo integro, crassiusculo; ascis octosporis; paraphysibus validis, septatis, clavatis et apice brunneo-nigris; sporidiis ovoideis, mox brunneis uniseptatis, 10-12 \* 5; epitheeio brunneo.

Hab. in thallo Leptotrematis mastoidei (Lichenes), prope Assumption, Paraguay (MÜLLER).

2. Melaspilea asteriscus (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de Fr. 7490 1913 p. 473, Melanographa asteriscus Müll. Arg., Flora 1882, p. 519.— Ascomatibus arcte gregariis et greges stellatos efformantibus, 330-600 μ diam., superficialibus, subconoideis, nigris, nudis, mediocriter elongatis, subrectis, angustissimis, apice indistincte apertis; excipulo basi non dilatato, hymenio subconoideo; ascis oblongo-ovoideis, tunica apice fortiter incrassata, 4-8 sporis; sporidiis primum hyalinis, dein brunneis, uniseptatis, 9 × 3,5.

Hab. in thallo Peltigerae dolichorrhizae, Nova, Hollandia austro-orient. (FINDLEY).

3. Melaspilea teneliula (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de Fr., 7491 1913, p. 474, Melanographa tenellula Müll. Arg., Flora 1883 p. 356.— Ascomatibus lirelliformibus et parum stellatim divisis v. furcatis, nigris, disco subplano demum parum aperto et concolori, 1 mm. lato multo majus longo, transverse secto late conoideo; ascis ovoideis, tunica apice parum incrassata, 8 sporis; sporidis subsoleaeformibus primum hyalinis, dein brunneis, 1-septato-constrictulis, loculo superiori parum latiori et breviori, 7-10 \* 2,5-4; epithecio brunneo, thecio hyalino.

Hab. in thallo Porinae epiphyllae, prope Apiahy, Brasilia, et Porinae insperatae, prope Malacca (MÜLLER ARG.). — Mel. asterisco proxima sed forma et dispositione ascomatum diversa.

4. Melaspilea leciographoides Vouaux, Bull. Soc. Mycol. de Fr. 1913, 7492 p. 472. — Ascomatibus raro solitariis, plerumque v. gregariis v. arcte 2-6 approximatis (et tunc habitu Leciographae monspeliensis), superficialibus, primum punctiformibus sed mox elongatis v. lirelliformibus, margine crasso, disco plus v. minus sed plerumque pauce expanso, rectis v. sinuosis, nigris, magnis, 0,15-0,50 mm. pro 0,1.0,2 mm.; excipulo crasso, obscure brunneo pseudoparenchymatico e cellulis polygoniis 7-10 cr. efformato; ascis clavatis breviter crasseque pedicellatis, apice late rotundatis et tunica praecipue ad apicem incrassata, octosporis, 75-80 × 23-28; paraphysibus agglutinatis, septatis, ramosis, 1-1,5 µ cr., apice plerumque inflatosubclavatis ibique brunneis crassioribusque et 3-3,5 μ diam.; sporidiis distichis ovoideis v. oblongis, utrinque late rotundatis, diu hyalinis, maturis brunneo-pallidis, uni-septato-constrictis, loculo inferiori angustiori, 19-22 \* 10-12; epithecio brunneo, tenui; thecio hyalino, hypothecio brunnescenti.

Hab. ad thallum albidum Verrucariae sp. (Lichenes),

Bédarieux Hérault, Gallia (A. DE CROZALS).

SCUTULA Tul. - Syll. VIII p. 486, X p. 25, XI p. 416, XVIII p. 174.

1. Scutula epiphylla (Merrill) Vouaux, Bull. Soc. Mycol. de Fr., 1913, 7493 p. 422, Biatora epiphylla Merrill, Lichen. exs. n. 93. — Ascomatibus solitariis sed numerosis vel 2-6 gregariis, primum immersis punetiformibus dein emergentibus et urceolatis, demum superficialibus margine plano tenui denique convexis et immarginatis, nigris. subcircularibus, 162-305 μ diam.; excipulo tenui, brunneo-rubrido tincto, pseudoparenchymatico e cellulis polygoniis efformato 3,5-6 µ diam.; ascis clavatis, breviter crasseque pedicellatis, apice late rotundatis ibique tunica crassiori praeditis, octosporis, 30-40 × 7,5-9; paraphysibus conglutinatis, parce septatis, praecipue ad apicem ramosis, 1,5 µ cr., apice etiam brunneis crassioribusque et 3,5-4 µ er.; sporidiis distichis, oblongis, utrinque rotundatis quandoque etiam infra v. rarius utrinque acutatis, hyalinis (senioribus quandoque brunneis), primum simplicibus, dein 1-septatis non v. leniter constrictis, plerumque 2-4 guttulatis, 7-10 > 2,5-4; epithecio obscure brunneo, thecio hyalino; hypothecio subincolori.

Hab. in thallo Peltigerae sp., Rockland Maine, America bor (G. K. MERRILL).— Scut. epigenae valde affinis et verisimiliter varietas tantum ejusdem.

2. Squtula Ramalinae (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de Fr., 7494 1913, p. 430, Patellaria Ramalinae Müll. Arg., Flora 1883, p. 79.— Ascomatibus pedicellatis, planis, primum nigris, submollibus, intus basi pallidis, 500-800 μ diam.; margine primum integro et prominenti sed mox subindistincto, in sectione nigro-violaceo, basi olivaceo, 40 μ crasso; ascis sublinearibus octosporis; paraphysibus liberis apice ramosulis incrassatisque; sporidiis oblongo-digitiformibus utrinque rotundatis, hyalinis, 1-septatis, 12 15 × 3,5; epithecio brunneo-violaceo; thecio hyalino-olivaceo; hypothecio obscure olivaceo.

Hab. in thallo Ramalinae Ecklonii v. membranaceae, prope Eucla, Australia occ. (J. OLIVER).

3. Scutula diaphana Lorton, Bull. Soc. Mycol. de Fr., 1914, p. 225, 7495 t. XII f. IV. — Minutissima, 0,2-0,5 mm. lata, gregaria, albida, diaphana, sessilis, glabra, immarginata, hymenio superne ascis prominentibus ruguloso; ascis amplis, oblongo ovatis infra attenuatis, fere sessilibus, octosporis, jodo fulvo-brunneo intense coloratis, 90-100 × 26; paraphysibus raris, ramosis, septatis, filiformibus,

ascis agglutinatis; cporis ellipsoideis, primum continuis et intus granulis oleosis numerosis repletis, dein uniseptatis, granulisque tunc in glomerulum centralem coalitis in unâquâque cellulâ, demum ad septum constrictis, quandoque apiculo filiformi incurvato,  $15 \times 2.5$  longo, utrinque ovatis, et sine apiculis  $15 \times 9$  longis et latis.

Hab. ad terram udam semitarum in sylvis, Rigny, Gallia.

- PLEOSCUTULA Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 434 (Etym. pleon plus, quia asci polyspori). Asci polyspori (nec octospori ut in gen. Scutula, cui coeterum omnino convenit).
- 1. Pleoscutula Arsenii Vouaux, l. c. p. 435.— Ascomatibus arcte gregariis, superficialibus v. basi tantum immersis, urceolatis, disco parum visibili et tune subperitheciiformibus, nigris, opacis, circularibus, minutissimis, 80-150 μ diam.; excipulo brunneo, crassiusculo, subamorpho; ascis clavato-cylindraceis, saepe infra ventricosis, breviter pedicellatis, apice rotundatis, tunica apice parum incrassata, 30-60-sporis, inordinatis, 56-83 × 12-16; paraphysibus filiformibus, liberis, simplicibus, infra indistincte septatis, 0,5-1 μ cr., sursum vix 2 μ incrassatis et brunneolis; sporidiis fusoideis, curvis, utrinque subacuminatis, hyalinis v. leniter flavidulis, infra medium 1-septatis, non constrictis, plerumque biguttulatis, 9-13 × 2-2,5; epithecio brunneo; thecio et hypothecio hyalinis.

Hab. in thallo Physciae sp. (Lichenes), Morelia, Lorna S. Maria, Mexico (BROUARD).

2. Pleoscutula pleiospora Vouaux, l. c. et in Bull. Soc. Bot. Fr. LVIII 7497 (1911), Mém. 22 p. 72 (Scutula). — Mycelio superficiale, fusco, reticulato, sinuoso, noduloso, 3-6 μ crasso, interdum gemmas solitarias vel catenulatas, subsphaericas, 5-6 μ diam. gerente; ascomatibus sparsis, primo innatis et punctiformibus dein emergentibus et urceolatis, demum planis tenuiterque marginatis, denique convexis, immarginatis, superficialibus, disco nigro fere circulari, 150-340 μ diam.; excipulo pseudoparenchymatico e cellulis polygoniis fuscis 3-4 cr., crasse tunicatis; ascis clavatis, leviter stipitatis, 34-38 × 12-16, membrana praesertim apice crassa; sporis in quoque asco 16 vel minus, usque ad 12, inordinatis, ellipsoideo-elongatis, utrinque rotundatis, hyalinis, 1-septatis, non constrictis, 8-8,5 × 2-2,5, loculo inferiore saepe tenuiore; paraphysibus agglutinatis, septatis, ramosis, 2 μ cr., capitulo ovali fusco 4-5 μ crasso terminatis. Hymenium jodii ope totum caerulescit.

Hab. in thallo Ramalinae Bourgaeanae (Lichenes), Vueltas de Taganana, 300 m. alt., Teneriffa (PITARD).

### Sect. 4. Phragmosporae

PATELLARIA Wahlenb .- Syll. VIII p. 786, X p. 61, XI p. 434, XVI p. 795, XVIII p. 179, XXII p. 756.

1. Patellaria proxima Berk. et Br. - Syll. VIII p. 796 (Lecanidion) - var. 74 pallens v. Hönel in P. Strasser, Verh. zool. bot. Ges. Wien 69., 1919. p. 367. - Ascomatibus depressis flavo-viridulis tenuiter nigro-marginatis, rotundatis v. ellipticis, 1/3 -1/2 mm. diam.; ascis clavatis, 60-70 \* 12-18, octosporis; sporidiis late fusoideis hyalinis quadrilocularibus,  $16 \times 4.5$ .

Hab. in Olematide Vitalba, Sonntagsberg, Austria Inferiore.

2. Patellaria californica Rehm, Ann. Mycol. IX, 1911, p. 367.— Apo-7499 theciis in ligno decorticato, late cinerascente gregarie sessilibus, atris, primitus globoso-clausis, mox disco orbiculari, rarius subelliptico, plano, ab initio tenuiter marginato explanato, 0,2-0,7 mm. diam., excipulo parenchymatice contexto, crasso, fusco, glabro; ascis clavatis apice rotundatis, octosporis, 80-90 × 7-8, J. ope -; sporis cylindraceo-oblongis, utrinque obtusis, rectis v. subcurvatis, medio septatis, haud constrictis, hyalinis, 10-12 \* 2,5, distichis; paraphysibus filiformibus 1,5 µ versus apicem 3-4 µ cr. et violaceofuscis, interdum dichotomis, epithecium crassum formantibus; hypothecio dilute flavidulo. - Hymenium nec Jodii nec epithecium Kali caust. mutatur.

Hab. ad ramos decorticatos Adenostomatis fasciculati et Arctostaphyli glaucae, Montes prope Claremont Californiae (BAKER). - Propter sporas septatas ad Patellariam pertinet haec Lecideae perparvulae alicui simillima species, apotheciis nunquam disculum convexulum praebentibus. Sporis fusiformibus haud septatis diversa: Patinella abietina (Cooke) Sacc.

3. Patellaria masseea Rodway, Pap. a Proc. R. Soc. Tasmania f. Year 7500 1920 (1921), p. 156. - Syn. Patellaria maura Massee, Kew Bull. n. 138 (1898) non Philips.— Syll. XVI p. 795. — Gregaria sessilis concava planiuscula obscure viridis demum arescendo nigra, 1-2 mm. lata; ascis clavatis, basi leniter constrictis octosporis, J. ope cyanescentibus, 150 × 10; sporidiis distichis oblongo-ellipsoideis, 3-6, saepe 5-septatis, hyalinis, 18-22 > 5; paraphysibus filiformibus

ramosis, apice incrassatulis.

Hab. in ramis emortuis Acaciae vernicifluae, Tasmania. — Pat. tasmanicae proxima.

4. Patellaria andina Speg., Myc. Argent. VI, Anal. Mus. Nac. Buenos 7501 Aires XXIII (1912) p. 105. — Ascomatibus matrice sordide cinerascente insidentibus, sparsis vel laxissime gregariis, discoideis, 250-500 μ diam., extus nigris, margine obtusiusculis, disco atrofuligineis, planiusculis, coriaceis, contextu grosse parenchymatico vix perspicuo; ascis subcylindraceis, breviter crasseque pedicellatis, 100 > 20-22, paraphysibus densis, subcoalescentibus apice nigrescentinus obvallatis; sporidiis distichis, cylindraceo-ellipsoideis, non vel leniter inaequilateris, utrinque rotundatis, 3-septatis, ad septum medium tantum lenissime constrictis, 22-25 \* 10; olivaceis, loculis centralibus senescendo obscurioribus.

Hab, in ramis emortuis decorticatis Prosopidis alpat a c o, circa Potrerilloso prope Mendoza, Argentina.

LECANIDION Rabenh. - Syll. VIII p. 795, X p. 60, XIV p. 821, XVI p. 796, XVIII p. 183, XXII p. 756.

1. Lecanidion baldratianum Sacc., Notae Myc. XXII p. 191 (R. Acc. 7502 Pad. 1917). - Ascomatibus laxe gregariis, superficialibus, sessilibus, plano-scutellatis, 1 mm. latis, nigris, glabris, ceraceo-coriacellis; ascis fusoideis, subsessilibus ob paraphyses conglutinatas parum discretis, 120 × 10-12, octosporis; paraphysibus apice grumosis, epithecium atrum formantibus; sporidiis tereti-fusoideis, utrinque obtusulis, rectis, distichis,  $30-33 \approx 4.5-4.7$ , hyalinis v. dilutissime chlorinis, 8-9-cuboideo nucleatis, spurieque (an ob immaturitatem) septatis, non constrictis.

Hab, in cortice putrescente Trichiliae sp., Filfil, Erythraea, Africa trop. - Videtur affine Lec. mauro, Lec. neo-guineensi, Lec. corticolae, sed satis differt.

2. Lecanidion andinum Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 7503 nos Aires XXIII (1912) p. 104. -L. fusco-atratum Speg., Myc. Arg. IV, 1909, p. 458. - Syll. VIII p. 796 -- non Rehm (vero atrum nec atratum). - Ascomatibus hinc inde laxe gregariis, patellaribus, sessilibus, discoideis, 1-2 mm. diam., margine acutis integris, extus nigris, disco planis vel vix concaviusculis, atris, glabris, contextu coriaceo, opaco, indistincto; ascis e cylindraceo subclavulatis, breviuscule pedicellatis, 80-100 × 12-15, muco immersis, paraphysibus parum longioribus, apice abrupte dense brevissime clathrato-ramu-

losis ac nigrescentibus cinctis; sporidiis oblique distichis, subclavulatis, leniter curvulis, utrinque rotundatis, primo 5-6-guttulatis, serius 5-septatis, ad septa non constrictis, hyalinis,  $20-25 \approx 5-7$ .

Hab. in truncis ramisque crassioribus decorticatis Lycii chilensis, Zuccagniae punctatae, Prosopidis alpataco et P. nigrae, prope Mendoza, Catamarca etc., Argentina. — Jodi ope quandoque nulla, quandoque leniter vel intense tunicam ascorum tingente.

3. Lecanidion australe Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 7504 nos Aires XXIII (1912) p. 104. — Ascomatibus laxe gregariis, patellaribus, tenuibus, 0,1-1,5 mm. diam., 200-250 μ crassis, plane sessilibus, margine acutis, atris, coriacellis, glabris; ascis clavulatis, antice latissime rotundatis, postice sensim attenuatis, in pedicello subbrevi productis, 90-120 × 18-20, paraphysibus longioribus, dense ramulosis obvallatis; sporidiis oblique distichis, clavulatis, curvulis, utrinque obtusiusculis, dense cribrose guttulatis vel obsolete 9-11-septatis, hyalinis, 35-50 × 10.

Hab. in cortice crassione Eucalypti globuli, La Plata, Argentina.

4. Lecanidion atratum (Hedw.) Rabnh.—Sacc. Syll. VIII p. 795 — f. 7505 hedericola Bubàk, Ann. Mycol. XII, 1914, p. 206.— A typo differt sporidis 40-70 × 10-12. — Hab. in caulibus emortuis Hederae helicis, Arco, Tirolia, Austria inf. (E. DIETTRICH-KALKHOFF).

#### MYCOBILIMBIA Rehm - Syll. X p. 60, XIV p. 822, XVIII p. 185.

1. Mycobilimbia atrosanguinea Rehm, Ann. Mycol. X, 1912, p. 396.— 7506 Ascomatibus in thallo Parmeliae cujusdam gregarie parasitice sessilibus, globulosis dein patellaribus, disco orbiculari tenuissime marginato, atrosanguineis, 0,15-0,2 mm. diam.; ascis clavatis, 50-60  $\star$  10-12, octosporis, J —; sporis oblongis, obtusis v. subacutatis, 1-3-septatis quaque cellula magniguttata, rectis v. subcurvatulis, hyalinis, 10-12  $\star$  3-3,5, distichis; hypothecio hyalino; paraphysibus filiformibus, apice dichotome globulosis, -4  $\mu$  cr., epithecium crassum, rubrum formantibus; excipulo glabro, fusco rubidulo, pseudoparenchymatico.

Hab. ad ramum Coniferae, Washington, U.S. America (Ex Herb. HARPER).

Mycobilimbia Rhaphidophylli (Rehm) Saccardo, Bilimbia Rhaphido- 7507 phylli Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2237.— Ascomatibus in maculis epiphyllis dilute cinereis

plerumque sparsis, sessilibus, orbicularibus, patellaribus disco plano vel convexulo, dilute flavido-brunneo vel fuscidulo, tenuiter marginato, 350 µ latis, excipulo membranaceo parenchymatico; ascis evlindraceis, apice rotundatis incrassatisque, octosporis, 30 × 12-14, J +: paraphysibus hyalinis, gelatinoso-conglutinatis; sporidiis distichis, oblongis, interdum curvatulis, 3-septatis, paullulo ad septa constrictis, hyalinis, 10-12 > 3-4.

Hab. in foliis Rhaphydophylli, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

3. Mycobilimbia melanospila (Müll. Arg.) Vouaux, Bull. Soc. Mycol. 7508 de Fr. 1913, p. 439, Opegrapha melanospila Müll. Arg., Flora 1877, p. 474. -- Mycelio ex hyphis 4 µ cr. in thallo matricis maculas nigrobrunneas hinc inde confluentes, circulares, distinctas, 0,75-1,25 mm. diam., efformante; ascomatibus in centro macularum 2-4 gregariis, superficialibus, linearibus, simplicibus rectis ramosis normaliter angulatis et tunc dimidiatim cruciatis, utrinque rotundatis, ostiolo lineari angusto praeditis et margine inflato obtuso praeditis, nigris, 125-250 μ long. 72-83 μ latis; excipulo crasso nigro-brunneo; ascis ovoideis octosporis; sporidiis oblongo-ovoideis, utrinque rotundatis, hyalinis, semper triseptatis, 13.14 × 5.6; thecio brunneo.

Hab. in thallo Parmeliae perforatae var. ciliatae (Lichenes), prope Caracas (ERNST).

4. Mycobilimbia acervata (Stitzenb.) Vouaux, Bull. Soc. Mycol. de Fr., 7509 1913, p. 439, Lecidea acervata Stitzenb., Lichen. Afric. p. 193. -Ascomatibus arcte gregariis immarginatis, thallo matricis subconvolutis, intus extusque nigris, 200 250 µ diam.; ascis octosporis; paraphysibus laxis, 2 µ cr.; sporidiis oblongis, hyalinis, 3-septatis, 13-16 \* 5-6.

Hab. in thallo Parmeliae subcaperatulae, prope Lydenburg Transvaal, Africa austr. (WILMS).

5. Mycobilimbia quaternella (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 7510 1913, p. 440, Opegrapha quaternella Nyl., Flora 1885 p. 447. — Ascomatibus submaculiformiter aggregatis, oblongo-difformibus, irregularibus, nigris, margine indistincto, 0,2-0,3 mm. long., excipulo brunneo; ascis 4-sporis, paraphysibus indistinctis, sporidiis oblongis, hyalinis, senectute brunneis, 3-septatis, 15-18 × 6-7; epithecio et hypothecio brunneis.

Hab. in thallo Pertusariae velatae, prope New Bedford. — A M. acervata et melanospila differt ascis tetrasporis, a M. anomea sporidiis minoribus quaternis.

6. Mycobilimbia farinacea (Oliv.) Vouaux, Bull. Soc. Mycol. de Fr., 7: 1913, p. 440, Melaspilea farinacea Oliv., Par. Lich. Fr. p. 47.— Ascomatibus superficialibus v. parum in pulvere sorediorum immersis, convexis v. convexiusculis intus extusque nigris, rotundatis v. subrotundatis, 0,3 mm. circ. diam.; ascis octosporis; paraphysibus gracilibus valde distinctis; sporidus fusoideo-acutis, hyalinis, 3-septatis, 10-15 × 3-4.

Hab. in thallo R a malinae farinaceae, Bazochesau-Houlme, Orne, Gallia (OLIVIER). — M. subfuscae proxima.

LECIOGRAPHA Mass. — Syll. X p. 61, XVI p. 797, XVIII p. 180. — Syn. *Mycolecis* F. E. Clements, Genera of Fungi 1909, p. 70, 174, quia saprophyticum (= Mycolecidea Karst.; Syll. X p. 61).

Subg. Dactylospora Körb.; Syll. X p. 62 (= Lecoglyphis F. E. Clements, Genera of Fungi 1909, p. 70, 174).

Leciographa Gyrolophii (Mass.) Vouaux, Bull. Soc. Mycol. de Fr., 7512
 1913 p. 493, Celidiopsis Gyrolophii Mass., Miscell. Lichen. p. 15.—
 Ascomatibus emergentibus, rugulosis, nigris, udis castaneo-brunneis, inflatis, marginatis, circularibus, parvis; sporidiis ovoideis, fuligineis, triseptatis, 19-36 × 12.

Hab. in thallo Gyrolophii mauritanici, Peru.
2. Leciographa Pertusariae Vouaux, Bull. Soc. Bot. Fr. LXIII (1911), 7513
Mém. 22 p. 70. — Ascomatibus gregariis, liberis, nigris, primum globosis atque occlusis, deinde disco detecto, plano, tenuiter marginato; ascis clavatis, apice rotundatis et tunica incrassata, octosporis, 50-80 × 18-25; paraphysibus aggregatis, ramosis, gemmula globosa apice praeditis, epithecio crasso fusco, hypothecio fusco; sporidiis elongatis, fuscis, 3 septatis, 20-22 × 8-9, episporio dense tenuiterque verrucoso, strato proligero J. cyanescente.

Hab. parasitica in thallo Pertusariae exalbescentis, ad Perseam, B.co d'Anavigo, Teneriffa alt. 1000 m.— A L. Zwackii Mass. cui proxima, differt figura ascomatum irregulari, sporidiis latioribus et verrucosis.

3. Leciographa conglomerans (Müll. Arg.) Vouaux, Bull. Soc. Mycol. 7514 de Fr. 1914, p. 137, Melaspilea conglomerans Müll. Arg., Lich. exot. p. 124 — Ascomatibus solitariis v. aggregatis, superficialibus, disco plano udo nigro-brunneo, nudo, margine tenui, ellipsoideis v. oblongis, 0,25-0,66 mm. long.; excipulo basi ascomatum nullo; ascis angustis, octosporis; paraphysibus validissimis, apice leniter cla-

vatis; sporidiis diu hyalinis, demum brunneis, 3 septatis, subdistichis.

Hab. in thallo Pertusariae, Santa Catarina, Brasilia (ULE).

4. Leciographa phylloporina (Müll. Arg.) Vouaux, Bull. Soc. Mycol. de 7515 Fr. 1914, p. 136, Opegrapha phylloporinae Müll. Arg., in Flora 1890, p. 193. — Ascomatibus superficialibus, nigris, linearibus, simplicibus v. 3-6 anguste ramoso-stellatis, parum depressis, 0,5-1 mm. long. 0,1 mm. latis; excipulo basi crassiori v. tenui; ascis octosporis; sporidiis late digitiformibus, hyalinis, demum brunneis, 3-septatis, loculis aequalibus, 12-17 × 4-5.

Hab. in thallo Philloporinae epiphyllae, prope Apiahy, Brasilia (PUIGGARI).

5. Leciographa convexa (Th. Fr.) Oliv., Par. Lich. Fr. p. 37, Vouaux, 7516 Bull. Soc. Mycol. de Fr. 1914, p. 135, Buellia convexa Th. Fries, Lich. Arct. p. 234. — Ascomatibus confertis, superficialibus, disco primum subplano et margine crassiusculo, dein convexo et immarginato, nigris, nudis, parvis; ascis clavato ventricosis, octosporis; paraphysibus laxe agglutinatis, apice inflatis brunneis; sporidis oblongis saepe curvis, brunneo-fuligineis, triseptatis, 16-22 × 6-7.

Hab. in thallo Physciae caesiae, saxicolae, prope Mortensnaes, Finlandia (Th. Fries). — A L homoica (Syll. XVIII p. 182) diversa, magis proxima L. urceolatae, Lamyi, physciariae.

6. Leciographa Nephromae Stein, Zool.-botan. Verhandl. 1870 p. 480, 7517 Vouaux in Bull. Soc. bot. de Fr. 1914 p. 136.— Ascomatibus primum immersis dein emergentibus et subsuperficialibus, disco primum circulari, dein lirelliformibus et immarginatis, nigris, minutis; ascis claviformibus, octosporis; sporidiis ellipsoideis, brunneolis, 3-septatis, 16-17 \* 4,8-5; epithecio et thecio brunneo-nigro; hypothecio flavo-brunneo.

Hab. in thallo Nephromii (Nephroma) levigati in Carpatiis (STEIN).

7. Leciographa Weissii Körb., Verh. Zool.-bot. Ges. Wien 1867, p. 707; 7518 Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 479. — Ascomatibus difformibus tunc patellaeformibus tunc subsphaeroideis, quandoque lirellinis, immarginatis sed anulo thallino circumdatis, nigris; ascis cylindraceis 6-8-sporis; sporidiis brunneis, triseptatis, 4-6-es latitudinem longioribus.

Hab. in thallo Ochrolechiae et Pertusariae, Dalmatia (Körber). 8. Leciographa insidens Steiner, Beitr. Flechtenfl. Südpers. p. 442.— 75 Vouaux, Bull. Soc. Mycol. de Fr. 1913, p. 492.— Ascomatibus solitariis v. parce gregariis iis L. monspeliensis forma et magnitudine similibus; ascis clavato-elongatis basim versus sensim attenuatis, tunica apice incrassata, octosporis, 80-107 × 20-24; paraphysibus collabescentibus apice vix inflatis; sporidiis tunica crassa, diu hyalinis, demum olivaceo-brunneis, triseptatis, 18-26 × 6-10; epithecio obscure brunneo et leniter olivaceo tineto; thecio demum plus v. minus brunneo; hypothecio brunneo.

Hab. in thallo lichenorum crustaceorum Verrucariae burchirensis, Caloplacae pyraceae et C. variabilis var. candidae, in Persia merid. (STEINER).

9. Leciographa stigmoides (Nyl.) Vouaux, Bull. Soc. Mycol. Fr. 1913, 7520 p. 492, Opegrapha stigmoideis Nyl., Syn. Lich. Nov. Caled. p. 55, Melaspilea stigmoides Müller, Lich. exot. n. 29.— Ascomatibus confertis, punctiformibus v. suboblongis, disco patelliformi, rugulosis, immarginatis, nigris, parvis, 0,05-0,15 mm. latis; ascis octosporis; sporidiis oblongis, hyalinis, senectute brunnescentibus, triseptatis, 18-20 × 5-7; epithecio nigro, hypothecio hyalino.

Hab. in thallo Verrucariae eminentiori, Nova Caledonia (PANCHER) et insula Lifu (MULLER). — A L. centrifuga ascomatibus immarginatis et hypothecio hyalino diversa.

10. Leciographa monspeliensis (Nyl.) Müll. Arg. 1872 p. 502 — Sacc., 7521 Syll. X p. 64. — var. mutilata Arnold, Verh. Zool. bot. Ges. (Lich. Tir. IX) p. 306. — A typo differt ascomatibus brevioribus, magis parvis, extremitatibus fere subtruncatis, ascomata Opegraphae simulantibus, 15-18 \* 5-6.

Hab. ad saxa nuda prope Roveredo, Tridentum (ARNOLD).— An Leciographa centrifuga in thallo obsoleto Verrucariae? (VOUAUX).

## MYCOBACIDIA Rehm — Syll. X p. 66, XVIII p. 183.

1. Mycobacidia vermifera (Leight.) Vouaux, Bull. Soc. Mycol. de Fr. 7522 1914, p. 141, Melaspilea vermifera Leight., Lich. Brit. 3 ed. p. 437.— Ascomatibus in stratu corticali immersis, irregulariter angulosis, oblongis, in sicco planis, margine spurio, thallino tenui limitatis, udis parum convexis et immarginatis, nigris, parvis; ascis ovoideo-linearibus sporidiis numerosis spiraliter dispositis praeditis; paraphysibus tenuibus apice pallidis; sporidiis cylindraceo-fusoideis, utrinque acutis, hyalinis, 1-septatis, 22 × 2, hymenio pallido.

Hab. in thallo et ascomatibus Pertusariae globuliferae, Anglia (LEIGHTON).

### Sect. 5. Dictyosporae

BLITRYDIUM De Not. — Syll. VIII p. 802, XI p. 435, XIV p. 823, XVIII p. 185, XXII p. 758.

1. Blitrydium andinum Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 105. — Ascomatibus sparsis vel laxe gregariis, rarius subseriatis, sessilibus, orbicularibus, 250-300 μ diam., margine obtuso, disco concaviusculo, atris, glabris, coriacellis; ascis subcylindraceis, breviter crasseque pedicellatis, 90-100 × 20-22, pseudoparaphysibus mucosis, coalescentibus, apice ramuloso-intricatis nigrescentibusque cinctis; sporidiis distichis, cylindraceo-ellipsoideis, utrinque rotundatis, rectis vel vix inaequilateris, olivaceis, 24-26 × 10-11, 3-septato-constrictis, loculis centralibus septo altero longitudinali divisis. — Jodi ope nulla.

Hab. in ramis decorticatis subemortuis Chuquir agae erinaceae in dumetis, Potrerillos prope Mendoza, Argentina.

TRYBL IDARIA Sacc. — Syll. VIII p. 805, XIV p. 33, XVIII p. 186, XXII p. 759.

1. Tryblidaria capensis (Stitz.) Vouaux, Bull. Soc. Mycol. de Fr., 1914, 7524 p. 138, Arthonia capensis Stitzenberg, Lich. Afric. p. 212.— Ascomatibus convexis immarginatis, obscure cyaneis, rugosis, circularibus, usque 0,5 mm. diam.; ascis subglobosis octosporis; sporidis oblongis, hyalinis, 5-transverse 1-2-longitudinaliter septatis, 18 × 8.— J. ope ascis fulvis, sporidiis brunneo-auratis.

Hab. in thallo Lecideae callainae, ad urbem Capitis B. S., Africa austr.

2. Tryblidaria lusitanica (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 1914, 7525 p. 138, Lecidea lusitanica Nyland., Flora, 1865, p. 606.— Ascomatibus planis v. subplanis, margine tenui, intus extusque obscure nigro, 0,5-1 mm. diam., ascis octosporis; paraphysibus agglutinatis; sporidiis brunneis, triseptatis, dein muriformibus, 27-40 ≥ 11-19.

Hab. in apotheciis Rhizocarpi geographici et in thallis crustaceis variis, Lusitania (NYLANDER).

#### Sect. 6: Scolecosporae

LACHMIA Körb. — Syll. X p. 65. — Syn. Parathalle F. E. Clements, 7520
Genera of Fungi 1909, p. 70, 174, quia parasitiea; typ. gen. L. Fuistingii Körb.; Syll. X p. 66.

# \*) Fam. 18. Caliciaceae Fr.

XYLOBOTRYUM Pat. -- Syll. XI p. 319, XVI p. 510, XVII p. 690.

Xylobotryum caespitosum A. L. Smith, Trans. Brit. Myc. Soc. III, 7527
 pt. 5, 1911 p. 331 (1912) c. ic. — Sphinetrina caespitosa Phill. —
 Syll. XI 439, nomen. — Ascomatibus globosis vel subglobosis, <sup>1</sup>/<sub>2</sub>
 mm. diam., stipitatis, dense caespitosis, stipite 3-4 mm. alto, corneo, saepe ramuloso; aseis cylindraceis, paraphysatis, 6 μ crassis; sporidiis monostichis v. pro parte distichis, brunneis, 1-septatis, 6-8 \* 3.

Hab. in fungo corrupto, probabiliter Polyporus sp., Hereford, Britannia.

#### EMBOLUS Wallr. - Syll. VIII p. 832.

1. Embolus Cacoti (Bouly de Lesd.) Saccardo, Mycocalicium Cacoti Bouly 7528 de Lesd., Bull. Soc. Bot. Fr. LVII (1910) p. 240.— Ascomatibus minutis, 0,2 mm. altis, stipitibus infra albidis, supra nigris vel omnino nigris, capitulis hemisphaerico-lenticularibus, nigris, vix 0,1 mm. latis; sporis simplicibus, dilute fuscis, fusiformibus, ellipsoideis, 9-12 × 3,5-4; spermatiis leviter curvatis, 4-5 × 0,9.

Hab. in cortice arboris emortui, prope Nouméa, Nova Caledonia (CACOT).

## Fam. 19. Arthoniaceae Rehm.

#### PHACOPSIS Tul. - Syll. X p. 74.

Phacopsis ericetorum (Flotow) Vouaux, Bull. Soc. Mycol. de Fr. 1914, 7529
 p. 144, Stigmatidium ericetorum Flot. ex Körb., Par. p. 461.— Asco-

<sup>\*)</sup> A Cl. F. E. CLEMENTS (Genera of Fungi 1909) nova gen. nonnulla Calicia-cearum condita, videntur plerumque dubia v. supervacanea: Eucyphelis (l. c., p. 71, 174), Sphinctrina anguste stipitata (typ. Sph. acicularis Smith); Holocyphis (l. c.), Cyphelium sphaerosporum (typ. Cy. balandieri Fuck.) Dipyrgis (l. c.), Pyrgillus (quid?) didymosporus; Ditylis (l. c.), Tylophorum (quid?) didymosporum (typ. T. moderatum Nyl.).

matibus raro solitariis saepe 2-4 aggregatis, et maculas stellatas efformantibus v. elongatis et sinuosis; primum immersis et punctiformibus, dein thallum elevantibus apertis, planis, demum convexinsculis sed vix e thallo prominentibus, nigris, forma irregularibus, raro subcircularibus saepius angulosis et varie sinuosis, 0,1-0,25 mm. long.; excipulo nullo; ascis anguste claviformibus subcylindraceis, apice late rotundatis, basi in pedicellum longiusculum attenuatis, tunica tenui apice parum crassiori, octosporis, 52-58 × 8,5-9,5; paraphysibus subliberis, 2 μ cr., apice clavato-incrassatis, 4-5 μ, olivaceis; sporidiis oblique monostichis, utrinque rotundatis, simplicibus, hyalinis, saepe grosse uniguttulatis, 10-18 > 3-4, epithecio obscure olivaceo; thecio et hypotecio pallidissime olivaceis.

Hab. in thallo Bacomyces rosei et rufi, Germania (Körber), Ambert, Gallia (Breviére).

2. Phacopsis campestricola (Nyl.) Vouaux, Bull. Soc. Mycol. Fr. 1914, 7530 p. 145, Lecidea campestricola Nyl., Flora 1884, p. 389. -- Ascomatibus marginalibus raro in medio areolarum v. in ascomatibus, gregariis, quandoque 2-5 v. ultra lineariter seriatis; primum immersis punctiformibus dein emergentibus, immarginatis, raro tenuiter submarginatis, demum plus minus convexis, praecipue udis nigris et violaceo tinctis; subcircularibus, 165-335 µ diam. (Nylander 0,3-0,4 mm.); excipulo nullo; ascis claviformibus, crasse pedicellatis, supra rotundatis, tunica apice incrassata, octosporis,  $40.50 \times 12.14$ ; paraphysibus arcte coalitis, septatis praecipue ad apicem ramosis, 2 μ cr., violaceis, apice incrassato capitatis sordide violaceis 4-6 μ cr.; sporidiis distichis ovoideis v. ovoideo-ellipsoideis, hyalinis, simplicibus, 1.2 guttulatis, 8,5-11 \* 5.6 (Nylander, 9-11 \* 4-6); epithecio obscure violaceo, thecio et hypothecio pallidiore.

Hab. in thallo raro in ascomatibus Lecanorae campestris, Força Real in Pyreneis orient. (NYLANDER), prope Béziers Herault Gallia (CROZALS).

3. Phacopsis Lesdaini Vouaux, Bull. Soc. Mycol. de Fr. 1914, p. 145. — 7531 Ascomatibus raro sparsis, saepe ad squamulas thallinas 3-10 gregariis, subimmersis, lenticularibus, superficie convexiuscula, immarginatis, nigris, sub lente sordide violaceis minutis, 60·130 μ lat; 40-60 μ altis; excipulo nullo; ascis clavatis, apice rotundatis, basi attenuatis in pedicellum brevem angustum attenuatis, octosporis, 26-34 × 7-8; paraphysibus parum coherentibus, basi tantum ramosis, parum septatis, leniter sinuosis, apice non inflatis ibique violaceis crassis, 1,5-2,5 μ; sporidiis distichis v. tristichis, utrinque rotun-

datis, simplicibus, hyalinis, saepe biguttulatis,  $6.7 \times 2.2.5$ , epithecium obscure sordideque violaceo, thecio pallide violaceo, hypothecio subhyalino.

Hab. in thallo Lecaniae erysibes, Fort-Mardyck Gallia sett. (BOULY DE LESDAIN). — Ascomatibus et sporidiis minutis a congeneris et praecipue a campestricola valde distincta.

#### CONIDA Mass. - Syll. X p. 75, XVIII p. 186.

1. Conida urceolata Elenkin, Lich. facult. p. 21; Vouaux, Bull. Soc. 7532 Mycol. de Fr. 1914, p. 154.— Ascomatibus sparsis in maculis griseis insidentibus, sub cortice nidulantibus dein erumpentibus, disco primum concavo dein quandoque plano, nunquam convexo, immarginato, quandoque margine thallino limitato, nigris, circularibus v. irregularibus, 0,2-0,5 mm. diam.; ascis piriformibus, tunica plerumque apice incrassata, octosporis,  $40-50 \approx 20-25$ , paraphysibus mox in massa cinnamomea collabescentibus; sporidiis inordinatis, oblongis, utrinque rotundatis, hyalinis v. flavidis, 1-septatis, loculo inferiori longiori sed angustiori, 15-17 × 7-8; epithecio nullo, thecio cinnamomeo, hypothecio hyalino sed J. ope cyanescente.

Hab. in thallo Aspiciliae alpino-desertorum f. fruticuloso-foliaceae et f. esculenta-alpinae (Lichenes), in zona alpina Tian Chan (FÉTISOF et ROBOROVSKI).

2. Conida Nideri Steiner, Prodr. Flechtenfl. Griech. p. 171; Vouaux, 7533 Bull. Soc. Mycol. de Fr. 1914, p. 154. — Ascomatibus mox convexis, immarginatis, lenticularibus, 0,4 mm. et ultra latis; ascis clavato-subpiriformibus, octosporis; paraphysibus valde irregularibus, late piriformibus, septatis tunica tenui, apice non distincte inflata; sporidiis ellipsoideis, hyalinis 1-septatis anguste constrictis, loculis conformibus subsphaeroideis, biguttulatis, 12-15 × 6-7; epithecio rubro pallido, thecio olivaceo v. apice viridi; hypothecio pallide rubro.

Hab. in thallo Caloplocae variabilis et ? agardhianae, «Kallidromon et Panaetolikon», Graecia (NIDER).

3. Conida subconveniens (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 1914, 7534 p. 166, Arthonia subconveniens Nyl., Flora 1867, p. 440.— C. strictariae similis sed sporidiis majoribus, 14-15 × 4.

Hab. in thallo Ricasoliae dissectae, Brasilia (WIDGREN). — C. Pelveti etiam affinis sed non satis nota.

4. Conida Ricasoliae (Müll. Arg.) Vouaux, Bull. Soc. Mycol. Fr. 1914, 7535

p. 166, Arthonia Ricasoliae Müll. Arg., Flora 1887, p. 424.— Ascomatibus maculiformibus saepe confluentibus, primum immersis et nigro-subolivaceis, dein emergentibus et opace brunneis convexiusculis, subregularibus circularibus, 333-400  $\mu$  diam.; ascis ovoideis saepius tetrasporis; sporidiis anguste soleaeformibus, utrinque rotundatis, hyalinis uniseptatis, 11-15  $\rm \times 3$ ; hymenio hyalino-olivaceo; hypothecio hyalino.

Hab. in thallo Ricasoliae Hartmanni, Queensland, Australia (MÜLLER ARGAU).

5. Conida stictaria (Nyl.) Vouaux, Bull. Soc. Mycol. de Fr. 1914, p. 7536 164, Arthonia stictaria Nyl., Add. Lich. Nov. Zel. in Flora 1867, p. 440.— Ascomatibus leniter convexis, brunneis v. brunneo-nigris, circ. 0,5 mm. diam.; ascis octosporis; paraphysibus vix visibilibus; sporidiis oblongis, hyalinis, 1-septatis, 7-10 \* 3,5-4,5; hymenio subhyalino.

Hab. in thallo Stictae auratae (Lichenes), Nova Zelandia.

#### CELIDIUM Tul. — Syll. VIII p. 742, X p. 76.

1. Celidium lepidophilum (Anzi) Vouaux, Bull. Soc. Mycol. de Fr. 1914, 7537 p. 169, Abrothallus lepidophilus Anzi, Anal. Lich. rar. p. 24, Lich. Longob. 473.— Ascomatibus gregariis v. congestis, primum immersis dein emergentibus, disco immarginato et convexo, nigris, siccis leniter pruinoso-virescentibus, 0,1-0,2 mm. diam.; ascis clavatis octosporis, 60 × 10-12; paraphysibus filiformibus, agglutinatis, septatis; sporidiis distichis, fusoideis, utrinque rotundatis, rectis v. curvulis, hyalinis, 1-3 septatis, 10-15 × 3-5; epithecio brunneo, hypothecio brunnescenti.

Hab. in squamulis thallinis Cladoniae pyxydatae (Lichenes), Valfurva, 1600 m. alt., in Alpibus Italiae (ANZI).

Celidium varians (Dav.) Arn. — Sacc. Syll. X p. 76 — var. intexta 7538 (Almq. Mon. Arth. p. 60) Vouaux, Bull. Soc. Myc. de Fr. t. XXX, 1914, p. 175. — A typo differt sporidiis semper 2-septatis, loculo medio parum majori et paraphysibus subcollabescentibus.

Hab. in apotheciis Lecideae sabuletorum var. coniops (Ach.) Körb., in Alpibus Europae.

3. Celidium bacidiospermum Steiner, Flecht. an Brit. Ost-Africa, p. 231; 7539
Vouaux, Bull. Soc. Mycol. Fr. 1914, p. 171. — Ascomatibus thallum subinflantibus et flavo-brunneum colorantibus, mox superficialibus, disco mediocriter convexo et immarginato, opace nigro, usque

ad 0,5 mm. diam.; ascis clavatis v. ellipsoideo-clavifor mibus breviter pedicellatis, tunica apiee incrassata, 6-8-sporis, 56 × 16-22; paraphysibus irregularibus, ramosis, apice connatis et coloratis; sporidiis elongato-subacicularibus, apice v. utrinque acutatis, rectis v. curvulis, hyalinis, 3-septatis, 22-34 × 4-5; epithecio nigrocyaneo methallico et subcyanescenti tincto, hypothecio nigrescenti et concolori.

Hab. in thallo Parmeliae pedicellatae, in Africa orient. britannica. — Forma et magnitudine sporidiorum distincta species.

4. Celidium phlyeticola Vouaux in Pitard et Harm., Contr. Lich. Ca-7540 nar. p. 70 (Bull. Soc. bot. Fr.); Vouaux, Bull. Soc. Mycol. de Fr. 1914, p. 177. — Ascomatibus sparsis, nigris, planis, parvis; ascis clavato-fusoideis, rotundatis et apice tunica crassa praeditis, bisporis v. raro trisporis, 50 × 16, paraphysibus agglutinatis; sporidiis subfusoideis, primum hyalinis dein brunneis, 5-raro 7-septatis, 30 × 6; epithecio nigro-brunneo, hypothecio hyalino quandoque brunneo-pallido.

Hab. in thallo Phlyctidis agelaeae, in Ilice, Tenerife, B. d'Anavigo, ins. Canar. (PITARD).

5. Celidium pulvinatum Rehm — Sacc. Syll. X p. 76 — Var. Stigmatom- 7541 matis Bagl. et Carest., Anacr. p. 315; Vouaux, Bull. Soc. Mycol. de Fr. 1914, p. 176.— A typo differt ascomatibus primum immersis et sphaeroideis, dein patelliformibus; sporidiis 22-23 × 8.9.

Hab. in thallo Polyblastiae (Stigmatommatis) cataleptae, in Alpibus Valesiacis (CARESTIA).

6. Celidium insidens Vouaux in Bull. Soc. bot. Fr. LVIII (1911) Mém. 7542 22. p. 70 et in Soc. Mycol. Fr. 1914, p. 169.— Mycelio superficiali, radiante, maculas brunneas ex hyphis 2-3 μ cr. hinc inde inflatis et gemmulas secedentes, ovoideas, 6-8 × 4-5, efformante; e mycelio primum pycnidiis dein ascomatibus orientibus; pycnidiis saepe 5-6 aggregatis, lenticulari-convexis, ostiolo vix prominentibus, nigris 0,2-0,3 mm. diam.; sporulis subcuneatis apice rotundatis infra subtruncatis, rectis v. quandoque curvulis, hyalinis, 1-septatis, non constrictis, 9-12 × 4-5; sporophoris simplicibus, brevibus, continuis v. 1-2 septatis apice obtusis, 9-20 × 2-3; ascomatibus sparsis, numerosis, basi tantum immersis, mox convexis et immarginatis demum lenticularibus convexis, nigris, 0,2-0,3 mm. diam., excipulo nullo; ascis clavatis basi distincte breviterque angustato pedicellatis, apice late rotundatis ibique tunica incrassata praeditis, octo-

sporis, 52-69 \* 16-18; paraphysibus agglutinatis, septatis, praecipue ad apicem ramosis,  $1,25-1,5~\mu$  cr., cellula ovoidea brunnea  $4~\mu$  crassa terminatis; sporidiis irregulariter subdistichis, oblongis v. ovoideis, utrinque rotundatis basi tantum parum angustioribus, rectis raro curvulis primum 1-dein 3-septatis, 15-16 \* 4-5; epithecio brunneo, thecio hyalino, hypothecio brunneo.

Hab. in thallo Ramalinae fraxineae (Lichenes), Tenerife, B. del Rio (PITARD). — Cel. lepidophilo (Anzi) valde affinis sed pluribus notis diversa.

7. Celidium proximelium Karst. — Syll. VIII p. 744. — Var. uralense 7543 Naoumoff, Champ. Oural. I (1915), p. 24, t. I f. 12 a. b. in Bull. Soc. Oural. XXV (1915). — A typo, cui valde proximum, differt sporidiis setis 3-6 rectis divergentibus hyalinis, usque ad 14 μ longis utrinque ornatis.

Hab. in cortice Juniperi communis, Perm, Ural, Rossia.

## Fam. 20. Ascocorticiaceae

ASCOCORTICIUM Bref. - Syll. X p. 71, XVIII p. 198, XXII p. 768.

1. Ascocorticium effusum Rodway L., Pap. and Proc. R. Soc. Tasmania 7544 f. Year 1920 (1921), p. 153.— Tenuiter membranaceus (demum evanescens) rubens, ligna dejecta late tegens, immarginatum, undique fertile; ascis directe ex hyphis araneosis ortis, clavatis, octosporis; sporis ellipsoideis obtusis levibus, hyalinis, 12-15 × 6; paraphysibus filiformibus septatis apice leniter incrassatis.

Hab. ad ligna dejecta et ad terram argillaceam, demum evanescens, Mc Robies's Gully, Tasmania. — In mentem revocat fere Trentepoliam.

## Fam. 21. Atichiaceae Millardet

ATICHIA Flot. - Syll. XXII p. 769.

1. Atichia dominicana Cotton, Bull. Bot. Garden Kew 1914 p. 54, cum 7545 ic. — Gelatinosa nigricans, applanata, stellato-ramosa; contextu ex hyphis torulosis muco immersis constituto, articulis hyalinis, ovoideis vel piriformibus, 5-10 μ longis, ultimis fuliginosis, minoribus, globosis; ramis horizontalibus patentibus, simplicibus aut furcatis, teretibus, fertilibus, inflato-nodulosis; ascis sub superficie

dispositis, in ramis normalibus vel intumescentibus propriis evolutis, 45-50  $\times$  25-28, late ovoideo-clavatis; sporidiis hyalinis, ovoideis, utrinque rotundatis, medio septatis et constrictis, 17-20  $\times$  8-10; propagulis (conidiis in greges collectis) in cortulis rotundis facie superiore thalli evolutis, triquetris, 20-30  $\mu$  longis, e cellulis ovalibus, 5-6  $\times$  4, compositis.

Hab. in foliis Citri medicae, saepe ad scutellos Lepidos aphis Beckii, Dominica, West Indies (J. Jones).—Ab A. Tonduzii Mang. et Pat. (
Heterobotrys paradoxa Sacc.) differt praecipue propagulis triquetris.

#### HORMOSPHAERIA Lév. - Syll. IX p. 611.

1. Hormosphaeria tessellata Lév. - Sacc. Syll. IX p. 611.

7546

Hab. in Nova Granata, Amer. Austr., ut in Syll. l.c.— Notae Mycol. XX, Nuovo Giorn. bot. it. 23., 1916, p. 223.— Sec. exempl. originale Lindig a cl. Hariot communicato, fungillus videtur ad Atichiaceas (Cfr. Syll. XXII p. 769) posse referri. Thallus dendriticostellatus, tenuissimus; asci cylindracei apice rotundati, 95-110  $\times$  12, subsessiles, octospori; paraphyses saepe ramosae, submoniliformes, septatae, 4,6  $\mu$  cr., hyalinae; sporidia oblique monosticha v. disticha, ellipsoidea, utrinque rotundata, 16-17  $\times$  9-10, continua dein obsolete 2-septata, non constricta, septis subapicalibus; perithecia eximie radiatim tessellato-sulcata adsunt sed « sporangia anhista, globosa et sporidia concatenata » qualia describuntur a cl. Léveillé, Sacc. non vidit. Genus servari potest characteribus reformatum.

## Fam. 22. Exoascaceae SADEB.

**EXOASCUS** Fuck. — Syll. VIII p. 816, X p. 69, XI p. 435, XIV p. 823, XVI p. 803, XVIII p. 196, XXII p. 763.

1. Exoascus Aceris Dearn. et Barth., Mycologia, 9., 1917, p. 350. — 7547 Maculis subcircularibus v. irregularibus, 0,5·1,5 cm. diam., supra griseo-rufulis, infra pallidioribus, deciduis; ascis copiosis, hypophyllis breviter clavatis v. cylindraceis, plerumque 30 × 9; sporidiis subglobosis v. irregularibus, hyalinis, 4,5-6 × 3-4,5.

Hab. in foliis vivis Aceris grandidentati (Aceraceae), Parley's Canyon Utah, Amer. bor. (BARTHOLOMEW et GARRETT).

Exoascus viridis Sadeb. in Jaap, Deutsche bot. Monatschr. XIX, 1901 7548
 p. 76, Maire in Bull. Soc. bot. Fr. 1910 p. CLXVII t. VIII f. 1-7

(sub Taphrina).— Hypophyllus; maculis griseo-viridibus, dein pallescentibus et arescentibus, non v. vix bullatis; ascis ellipsoideo-oblongis, junioribus apice subretusis, adultis apice rotundatis,  $16-22 \times 10$ , octosporis; sporidiis subglobosis v. ellipsoideis, mox gemmiparis, gemmis  $5-6 \times 3-4$ ; cellula subascali in epidermide immersa.

Hab. in foliis vivis Alni viridis (Betulaceae), S. Martino Vesubia Alp. Maritt. Ital., et in Germania et Scandinavia.

3. Excascus Avellanae Connold, Plant Galls of Great Britain, London, 7549 Adler 1909, p. 117 n. 128 fig. 131 (nomen nudum).— Excascus Coryli E. Lemée, Les Ennemis des Plantes p. 1, in Bull. Soc. d'Hortic. de l'Orne, Alençon 1917, nomen nudum.

Hab. generat cladomanias in Corylo Avellana («balai de sorciere» et «Witches' broom» dictas), prope Hastings, Anglia, et in Cor. Avellana var. foli is laciniatis (Betulaceae), Alençon, Gallia (Tellier Croisé).

4. Exoascus Cerasi-microcarpae Kuschke in Monit. Jard. Bot. Tiflis 7550 XXXI, 1913, p. 23.— Mycelio in parenchymate corticali ramorum perennante; stato ascophoro in fructibus deformatis apparente; ascis densis, octosporis, clavatis, breviter stipitatis, 35-50 μ longis, 10-13 μ crassis; sporis rotundatis, ovalibus vel ovatis, majusculis, 5-7,5 × 5-6,25.

Hab. in fructibus juvenilibus Cerasi microcarpae (Rosaceae), in faucibus Mazit, prov. Elisabethpol distr. Ares, Transcaucasia.

- \*) **TAPHRINA** Fr. Syll. VIII p. 812, X p. 67, XI p. 437, XIV p. 824, XVI p. 1152, XVIII p. 197, XXII p. 765.
- Taphrina Jaczewskii Palm, Arkiv. för Bot. Bd. 15., 1917-1918, n. 5, 7551 p. 38.— Ita vocandum est Exoascus confusus Jaczewski (in Acero) (Syll. XVIII p. 196), quia jam extat Exoascus confusus Atkinson (Syll. XI p. 436).
- 2. Taphrina media Palm, Arkiv för Bot., Bd. 15., 1917-1918, n. 5, 7552 p. 20, fig. 4-5. Mycelio inter cuticulam et epidermidem ramorum foliorumque vivorum crescente, ramis foliisque deformante « scopas sagarum » formante; ascis in pagina foliorum inferiore superio-

<sup>\*)</sup> Cnfr. BJ. Palm, Svenska Taphrinaarter, in Arkiv. för Botanik, Bd. 15., 1917-1918, N. 4., pp. 1-41, 9 fig.

reque insidentibus, late cylindraceis, apice truncatis, 25-90  $\mu$  alt., 10-12  $\mu$  crass.; sporis octonis, globosis, 3-5  $\mu$  diam.

Hab. in ramis et foliis Alni glutinosae (Betulaceae), Sudermaniae et Upplandiae, Suecia.

3. Taphrina Lagerheimii Arkiv. för Bot., Bd. 15., 1917-1918, n. 5, p. 12, 7553 fig. 2.— Mycelio inter cuticulam et epidermidem ramulorum foliorumque vivorum erescente; aseis in pagina inferiore insidentibus, cylindraceis, apice rotundato-truncatis, 53-60  $\approx$  13,5-17; cellula basilari 19,5-23,5  $\mu$  alta, 19,5-26  $\mu$  crass.; sporis subglobosis 4,5-6  $\mu$ ; conidiis minutissimis, globosis.

Hab. in Betula odorata (Betulaceae), ad Kapellskär, Rådmansö paroec. Upplandiae, Suecia.

4. Taphrina lapponica Juel, Svensk Bot. Tidskr. 1912. — Palm, Arkiv. 7554 för Bot., Bd. 15., 1917-1918, n. 4, p. 7 et 10, fig. 1. — A Taphr. alpina Joh. differt praecipue mycelio in ramulis perennante; ascis 40 × 16 (nec 20-27 × 9-14).

Hab. in foliis Betulae odoratae et alpestris, Suecia boreali.

5. Taphrina lata Palm, Arkiv för Bot., Bd. 15., 1917-1918, n. 5 p. 10. — 7555 Ramis foliisque mycelio, inter epidermidem et cuticulam crescente, inficiente, leviter deformante; ascis in foliorum pagina inferiore insidentibus, cylindraccis, apice rotundatis,  $40.45 \times 18-22$ ; cellula stipitali 16-20  $\mu$  alt., 25-33  $\mu$  crass.; sporis non visis; ascis conidiis minutissimis vel 3-5  $\mu$  long. repletis.

Hab. in Betula odorata, ad Tungelsta, Sudermanniae, Succia.

6. Taphrina splendens Palm, Arkiv för Bot., Bd. 15., 1917-1918, n. 5., 7556 p. 16, fig. 3. — Mycelio inter epidermidem et cuticulam ramorum foliorumque vivorum crescente « scopas sagarum » formante; ascis in foliorum pagina inferiore insidentibus, dense confertis, subcylindraceis, apice truncato-rotundatis, ad basim leviter constrictis, 59-71 × 20-23; cellula basilari truncata, 20-25 μ alt., 20-24 μ cras.; sporis non visis; conidiis minutis, globosis.

Hab. in Betula odorata, ad Abisko et Palnoviken in Lapponia Tornensi, Suecia.

7. Taphrina mexicana Sydow, Ann. Mycol. 18., 1920, p. 159. — Hy- 7557 pophylla, folia tota rubescentia occupans; asci dense aggregati, cylindracei, apice rotundati vel saepius truncati,  $28-35 \times 6-9$ , octospori, cellula basilari 9-13  $\mu$  longa et 7-10  $\mu$  lata suffulti; sporae ellipsoideae,  $3,5-4,5 \times 2,5-3,5$ .

Hab. in foliis Prunii microphyllae (Rosaceae), et parvas cladomanias etiam efformans, Mexico (REICHE).

8. Taphrina wettsteiniana Herzfeld, Oesterr. Bot. Zeitschr. 60 (1910) 7558 p. 249, c. ic. — Vesiculosa, brunneola; mycelio subcuticulari sed mesophyllum etiam invadente; ascis gracilibus, cylindraceis, sursum attenuatis, rotundatis vel acutiusculis, 50-70 × 5-7, plerumque cellula basilari sterili praeditis; sporis octonis, oblongo-fusoideis, utrinque acutatis, medio interdum subconstrictis, 5 × 1, hyalinis. Hab. in frondibus Polystichi Lonchitjdis (Fili-

Hab. in frondibus Polystichi Lonchitidis (Filices), Sondestal, Tirolia bor.

9. Taphrina rhomboidalis Syd. et Butl., Ann. Mycol. IX, 1911, p. 373, fig. 1.— Haud deformans; maculas amphigenas planas haud bullatas plerumque venulis limitatas e centro ad marginem pinnularum extensas quoad formam rhomboidales aureas in epiphyllo quam in hypophyllo parum obscuriores aetate brunneas utraque pagina fertiles efformans; ascis clavatis, superne crassioribus, apice rotundatis,  $30.32 \times 6.5 \cdot 8, 6 \cdot 8 \cdot 8$  sporis; sporidis ellipsoideis, hyalinis,  $5.7.5 \times 2.3$ 

Hab. in frondibus Pteridis quadriauritae (Filices), Kumaon Himalaya, Indiae or. (JNAYAT).

10. Taphrina maculans E. J. Butler, Ann. Mycol. IX, 1911, p. 39, tab. IV et 1 icon. — Maculis amphigenis, aureo-brunneis, subrotundis, hyphis sterilibus inter parietes cellularum epidermidis et hypodermidis, fertilibus inter cuticulam et epidermidem crescentibus; ascis clavatis, cellulis basilaribus una v. paucis suffultis, apice rotundatis v. truncatis, basi saepe attenuatis, parte libera 20-30 × 6,5-10, plerumque 8-sporis; sporidiis ovoideis v. suboblongis, 4-6,5 × 2-2,5.

Hab. in foliis Curcum a e long a e (Zingiberaceae), et Zing i beris Casum anar, Indiae or.

11. Taphrina linearis Sydow, Ann. Mycol. XII, 1914, p. 568. — Maculis distinctis, primitus orbicularibus albidis ½-1 cm. diam. fusco-purpureo marginatis, dein confluentibus et tandem toto folio pallescente; caespitulis paucis (1-3) in quaque macula, striiformibus, 3-10 mm. longis, ½-1 mm. latis, aureo-brunneis, epiphyllis, hyphis sterilibus inter parietes cellularum epidermidis et hypodermidis, fertilibus inter cuticulam et epidermidem crescentibus; ascis clavatis, cellulis basalibus una vel paucis suffultis, apice rotundatis v. truncatis, densissime stipatis immaturis tantum visis, ca. 25 × 7-9.

Hab. in foliis vivis v. languidis Globbae marantinae (Zingiberaceae), pr. Angat prov. Bulacan Ins. Philippin. (M. RAMOS). — Taphr. maculanti Butl. proxima.

#### Gen. incertae sedis

TYRIDIOMYCES Wheeler, Bull. Amer. Mus. Nat. Hist., v. XXIII, 1907, p. 772. — Diagn. nulla.

1. Tyridiomyces formicarum Wheeler, I. c. tab. I fig. 29, tab. 411 fig. 7562 43-44.— Bromatiis subpiriformibus, 0,25-0,55 mm. diam., albidis v. flavidis, aspectu caseoso; sporulis minutis ellipsoideis v. subsphaeroideis, 0,78-2 × 0,78-1; contextu granuloso-vacuolato; aspectu saccharomycetoideo.

Hab. socio Cyphomyrmecis rimosi.

# Fam. 23. \*) Endomycetaceae Schr.

ENDOMYCES Rees.— Syll. VIII p. 821, X p. 70, XVI p. 1153, XVIII p. 202, XXII p. 767.

1. Endom ces Lindneri Saito, Zeitschr. f. Gärungsphys. II (1913) p. 7563 151. — Mycelio ramoso, septato; conidiis in ramis fertilibus acropleurogenis, sessilibus, singulis vel breviter catenulatis, e globoso ovoideis, 7-9 ≈ 5-7 (ex icone); ascis in apice vel ad septa hypharum fibulato-copulatarum sitis, globosis vel subglobosis, 9-12 μ diam.; sporidiis in quoque asco plerumque 2-4, galeaeformibus, idest concavo-vel plano-convexis et basi marginatis, 3,6-7 μ latis (sine margine), hyalinis.

Hab. in cerevisia m'i li o confecta et « hoangchiu » dicta, in Cina.— Obs. - E. fibuligeri characteribus morphologicis valde affinis, sed biologice facile dignoscenda species, quia maltosium et dextrina in fermentationem inducit.

# Fam. 24. \*\*) Saccharomycetaceae Rees

**SACCHAROMYCES** Meyen — Syll. VIII p. 916, XI p. 437, XIV p. 828, XVIII p. 198, XXII p. 771.

Saccharomyces Laghbi Gasperini, Atti R. Acc. Georg. Firenze Ser. 7564
 V. v. 10., an. 1913, p. 98, fig. 2,4. — Sacch. Cerevisiae Gasper. nec

<sup>\*)</sup> Cnfr. Zender, Bull. Soc. botan. de Genève, 17., 1925 p. 258 et p. 272, in quo genera et species nova describuntur, de quibus in futuris volum..

<sup>\*\*)</sup> Cfr. etiam gen. Torulopsis inter Mucedineas.

Mey., in Bull. Soc. Bot. it. XX, 1888, p. 446. — Cellulis 8-9.5  $\approx$  4.5-8, nonnullis minoribus 3-4  $\times$  1.5-3.

Hab. in vino Phoenicis dactyliferae «laghbi» dicto. Tripolitania, Africa bor. — Sacch. Cerevisiae affinis cuius videtur forma tantum notis biologicis hucusque distincta.

2. Saccharomyces Opuntiae Ulpiani e Sarcoli, Gazzetta Chimica ita-7565 liana XXXI, P. II, 1901, p. 403, con 1 tav.; t. XXXIII, 1903, P. I, p. 441. — Cellulis majusculis primum 8,4-9.6 \* 4,8-6 ovoideo-elongatis solitariis, demum magis elongatis angustioribus subbacillaribus, usque ad 24 \* 4,8, catenulatis; maximum temp. in culturis + 50°; colore nullo; ferment. in glucosio et levulosio.

Hab. in musto fermentanti fructuum Opuntiae Fici indicae, Italia austr.

3. Saccharomyces Ribis R. E. Ludwig, Bull. Soc. bot. Genève, 1917, 7566 p. 439 f. 5-8. — Cellulis ovoideis quandoque rotundatis, plerumque vacuolum magnum extus granulosum praeditis, 2,5-7 × 1-3, lateraliter gemmantibus et tune typice angulosis; ascis rotundatis v. ovoideis tetrasporis. — Fermentatione in musto vini valida. In culturis in 2 menses fluidificat gelatinam; culturis in musto cum gelatina ad 10 % rotundatis, ambitu albis, dentatis, centro flavis et umbonatis.

Hab. in fructibus Ribis rubri et ad terram sub ejusdem plantis, Helvetia.

Saccharomyces Gentianae H. Guyot, Bull. Soc. bot. Genève, 1916, 7567
 p. 307, fig. XVI-XVII. — Affinis Sacch. Lendneri, a quo differt sporis membrana liquefacta evanescente liberatis.

Hab. in fermentatione radicis Gentianae luteae, ex Jura Helvetiae.

Saccharomyces juillardensis H. Guyot, Bull. Soc. bot. Genève, 1916, 7568
 p. 307, f. XVIII-XIX. — Affinis Sacch. Gentianae, a quo differt ruptura asci transversali.

Hab. in fermentatione radicis Gentianae luteae, Jura Helvetiae, loco dicto « La Juillarde », alt. 1100 m.

6. Saccharomyces Zopfii Artari, Sacc. Syll. XVIII p. 201; H. Guyot, 7569 in Bull. Soc. bot. Genève, 1916 p. 305 fig. XI-XII.— Coloniis juvenilibus rotundatis, tenuiter striatis, flavis, gigantibus, gelatinam liquefacientibus intra mensem et dimidium; cellulis rotundis v. ovoideis; germinantibus, 2,5-6 × 2,5-5.

Hab. ex fermentatione radicis G e n ti a n a e l n t e a e, Jura Helvetiae et in succo s a c c h a r i n o in Germania.

7. Saecharomyces Lendneri H. Guyot in Bull. Soc. bot. Genève 1916, 7570 p. 306-307 fig. XIII-XV. — Cellulis rotundatis v. plus minus ovalibus, 3-6 × 2,5-5; coloniis levibus, politis, leviter striatis deposito seu crassamento in liquido uniformi; sporis tetraedrice dispositis ruptura asci apicis liberatis, sphaericis, minutis.

Hab. ex fermentatione radicis Gentianae luteae, ex Jura Helvetiae.

8. Saccharomyces Lindneri Guillierm. in Annal. Sc. Nat. Botan., sér. 7571 IX t. XIX (1914) p. 16, tab. 4. — Cellulis late ovoideis, raro subglobosis 4-9 × 4-8, senescendo amplioribus, plerumque solitariis vel subsolitariis; sporis in quoque asco 1-4, sphaerieis, 2-3 μ diam.

Hab. in vino e rhizomate Zingiberis officinalis parato, Africa occidentali (CHEVALIER). — E stirpe S. ellipsoidei.

Saccharomyces Chevalieri Guillierm, in Ann. Sc. Nat. Botan. sér. 7572
 IX, t. XIX (1914) p. 3 tab. 1. — Cellulis majusculis, sphaeroideis vel ovoideis, 5-9 × 4-7, gemmantibus, saepe 3-10 in colonia adhaerentibus; sporis 1-4 in quoque asco, sphaeroideis, 2,5-3,5 µ diam.

Hab. in vino [vin d' Elalis], Côte d' Ivoire, Afr. occid. (CHEVA-LIER). — E stirpe S. ellipsoidei.

10. Saccharomyces Mangini Guillierm, in Annal. Sc. Nat. Botan., ser. 7573 IX, t. XIX (1914) p. 7 tab. 2.— Cellulis ovoideis vel subglobosis, solitariis vel e gemmatione 2-4 consociatis, 3-10 \* 3-7; sporis in quoque asco 1-4, sphaericis, 2-2,5 μ diam.

Hab. in vino [vin de Bili] e tuberculis Osbeckiae grandiflorae parato, Conakry, Guinea gallica, Afr. (CHEVALIER).— E stirpe S. ellipsoidei.

11. Saccharomyces Lebenis E. Rist et J. Khoury, Études sur un lait 7574 fermenté commestible le « Leben » d' Egypte p. 76, Ann. Inst. Pasteur XVI, 1902, p. 65-84. — Cellulis ovoideis 3-6 μ diam., intus distincte granulosis, solitariis raro binis conjunctis, gemmulis mox secedentibus; mycelio et endosporis ignotis; in saccharosio et maltosio fermentationem inducit, nullam in lactosio.

Hab. in lacte fermentato « leben » dicto. — De « leben » Algeriae, cnfr. Arnold, Thése de Montpellier 1890.

HANSENIOSPORA Zikes., Centralbl. f. Bakter. II Abt. XXX, p. 145
 (1911) — Saccharomyces apiculatus Rees — Syll. VIII p. 918. — Collective sumptus, sec. Auct. dividi potest in greges duos, nempe: Hanseniospora Zickes, complectens formas ascigeras, et Hansenia Lindn. (non Karst.) complectens formas non ascigeras.

Hanseniospora valbyensis Klöck., C. R. Trav. Lab. de Carlsberg, v. 7575 X, 1913, 4. Livr. p. 341, tab. VII fig. 33-36, tab. VIII fig. 37-42.— Cellulis (temp. 25°) limoniformibus, ellipsoideis v. demum plus minusve elongatis, 5-8 μ long.; ad temp. 30° plerumque conformibus nonnullis tantum longioribus; sporis endogenis plerumque binis primum sphaeroideis dein hemisphaericis. Temperies genmationi apta: maxima 32°-33°, minima 0,5 et infra.

Hab. ad terram, Vesterfaelled, Valby, Copenhague (Dania), sed characteres ex cultura in musto cerevisiae. – Inducit fermentationem alcoholicam in dextrosio, levulosio et d-mannosio.

PSEUDOSACCHAROMYCES (Van Laer, Bull. Ass. belge des Chemistes 1893, n. 3) Klöcker, C. R. Trav. Labor. de Carlsberg v. X, 1913, 4. Livr. p. 323, non Briosi e Farn. — Syll. XXII p. 780.— Cellulae limoniformes; endosporae nullae. — Huc pertinet Saccharomyces apiculatus Rees-Hansen — Vix differt a genere Cryptococco Kütz. — Syll. XXII p. 776 — quocum aptius conjungendum videtur.

Pseudosaccharomyces austriacus Klöck., C. R. Trav. Lab. de Carlsb. 7576
 v. X, 1913, 4. Livr. p. 326, tab. II fig. 3-4.— Cellulis limoniformibus v. ellipsoideis rarissime subhemisphaericis, 4-6 μ long.; temperies gemmationi apta: maxima 35°-36°, minima 3.5°-0.5°.

Hab. ad terram in Alpibus Austriae, sed characteres ex cultura in musto cerevisiae. — Inducit fermentationem in dextrosio, levulosio, d-mannosio.

2. Pseudosaccharomyces africanus Klöck., l. c. p. 327, tab. II fig. 5-6.— 7577 Cellulis plerumque elongato-limoniformibus 7-12 μ long. ad temperiem 25.°, subhemisphaericis ad temp. 33.°; temper. gemmationi apta: maxima 36°-37°, minima?

Hab. ad terram, Akbau Algeriae, sed characteres ex cultura in musto cerevisiae. – Inducit fermentationem in dextrosio, levulosio, d-mannosio et parum in maltosio.

3. Pseudosaccharomyces corticis Klöck., l. e. p. 327, tab. III fig. 7-8.— 7578 Cellulis (temp. 25.°) breviter limoniformibus raro ellipsoideis, 6-15 μ long., ad temp. 33.° inflatis subsphaeroideis et usque ad 30 μ cr.; temperies gemmationi apta: maxima 36°-37°, minima 3.5°-0.5°.

Hab. ad cortices lichenosas et muscosas arborum, prope Copenhague (Dania), sed characteres ex cultura in musto cerevisiae. — Inducit fermentationem in dextrosio, levulosio et d-mannosio et parum in maltosio.

4. Pseudosaccharomyces Mülleri Klöck., l. c. p. 328, tab. III fig. 9-10. - 7579

Cellulis (ad temp. 25.°) limoniformibus v. ellipsoideis, 4.6  $\mu$  long., ad temp. 33.° inflatis forma eximie variabilibus; temperies gemmationi apta: maxima 35°-36°, minima 3.5°-0.5°.

Hab. ad terram in Insula Java, sed characteres ex cultura in musto cerevisiae. — Inducit fermentationem in dextrosio, levulosio et d-mannosio. Species Cl. D.r Müller-Thurgau dicata.

5. Pseudosaccharomyces Lindneri Klöck., l.e. p. 328, tab. HI fig. 11-12.— 7580 Cellulis (temp. 25.°) limoniformibus v. ellipsoideis, 3-5 μ long., ad temp. 33.° inflatis et parum longioribus; temper. gemmationis apta: maxima 36°-37°, minima 8°-6°.

Hab. ad terram in Insula Java, sed characteres ex cultura in musto cerevisiae. — Inducit fermentationem in dextrosio, levulosio et mannosio. Species Cl. Prof. Lindner dicata.

6. Pseudosaccharomyces germanicus Klöck., l. c. p. 329, tab. IV fig. 7581 13-14. — Cellulis (temp. 25°) plerumque limoniformibus paucis tantum ellipsoideis, 5-8  $\mu$  long., ad temp. 33° inflatis sphaeroideo-elongatis et usque ad 30  $\mu$  long.; temperies gemmationi apta: maxima 36°-37°, minima 8°-6°.

Hab. ad terram in montibus Harz Germaniae, sed characteres ex cultura in musto cerevisiae.— Inducit fermentationem in dextrosio, levulosio et d-mannosio.

7. Pseudosaccharomyces Jenseni Klöck., l. c. p. 330 tab. IV fig. 15-16.— 7582 Cellulis (temp. 25°) plerumque ellipsoideis nonnullis tantum limoniformibus, 2-5 μ long., ad temp. 35° parum inflatis sed fere conformibus; temperies gemmationi apta: maxima 37°-38°, minima 6°-3.5°.

Hab. ad terram in Insula Java, sed characteres ex cultura in musto cerevisiae.— Inducit fermentationem in dextrosio, levulosio, d-mannosio, saccharosio et parum in maltosio.— Species Cl. Hjalmar Jensen dicata.

8. Pseudosaccharomyces javanicus Klöck., l. c. p. 330, tab. IV fig. 7583 17-18.— Cellulis (temp. 25°) limoniformibus, nonnullis magis elongatis v. ellipsoideis, 6-12 μ long., ad temp. 35° subimmutatis v. parum crassioribus; temper. gemmationi apta: maxima 38°-39°, minima 8°-6°.

Hab. ad terram in Insula Java, sed characteres ex cultura in musto cerevisiae. — Inducit fermentationem in dextrosio, levulosio, dmannosio, saccharosio et parum in maltosio.

Pseudosaccharomyces malajânus Klöck., l. c. p. 331 tab. V, fig. 19-20.— 7584
 Cellulis (temp. 25°) elongato-limoniformibus v. parum subhemisphaericis, 5-12 μ long., ad temp. 35.° crassioribus et subsphaeroideis;

temper. gemmationi apta: maxima 36°-37°, minima 8°-6°.

Hab. ad terram in Insula Java, sed characteres ex cultura in musto cerevisiae. - Inducit fermentationem in dextrosio, levulosio, d-mannosio, saccharosio et parum in maltosio.

10. Pseudosaccharomyces Lafari Klöck., l. c. p. 332 tab. V fig. 21-22. 7585 Cellulis (temp. 25°) plerumque elongato-limoniformibus, nonnullis etiam elongato-ellipsoideis, 5-10 µ long., ad temp. 35° aliis confor-. mibus plurimis subhemisphaericis raris magis elongatis; temp. gemmationi apta: maxima 36°-37°, minima 8° 6°.

Hab. terram in Insula Java, sed characteres ex cultura in musto cerevisiae. - Inducit fermentationem in dextrosio, levulosio, d-mannosio, saccharosio, parum in maltosio. — Species Prof. F. Lafar dicata.

11. Pseudosaccharomyces Willi Klöck., l. c. p. 332, tab. V fig. 23-24. - 7586 Cellulis (temp. 25°) limoniformibus, nonnullis minoribus ellipsoideis, 4-10 μ long., ad temp. 35° plerumque fortiter inflatis, piriformibus v. ovoideis, nonnullis 12 \* 6 cr.; temper. gemmationi apta: maxima 37.5°-38.5°, minima 8°-6°.

Hab. ad terram, St. Thomas (Antillae danicae), sed characteres ex cultura in musto cerevisiae. - Inducit fermentationem in dextrosio, levulosio, d-mannosio, saccharosio, parum in maltosio. - Species Cl. Prof. H. WILL dicata.

12. Pseudosaccharomyces Antillarum Klöck., l. c. p. 333, tab. VI fig. 7587 25-26. - Cellulis (temp. 25°) limoniformibus, nonnullis parvis et ellipsoideis, 5-12 µ long., ad temp. 35.° parum incrassatis conformibus vel plurimis ellipsoideis; temper. gemmationi apta: maxima 37°-38°, minima 4°-3°.

Hab. ad terram in St. Thomas (Antillae Danicae), sed characteres ex cultura in musto cerevisiae. - Inducit fermentationen in dextrosio, levulosio, dimannosio, saccharosio, parum in maltosio.

13. Pseudosaccharomyces occidentalis Klöck., l. c. p. 334, tab. VI fig. 7588 27-28. — Cellulis (temp. 25°) plerumque limoniformibus, nonnullis etiam ellipsoideis 6-10 µ cr., ad temp. 35° magis crassis et plus minus deformatis; temp. gemmationi apta: maxima 39°-40°, minima 6°-3.5°.

Hab. ad terram, Ste. Croix (Antillae Danicae), sed characteres ex cultura in musto cerevisiae. - Inducit fermentationem in dextrosio, levulosio, d-mannosio, saccharosio et parum in maltosio.

14. Pseudosaccharomyces santacruzensis Klöck., l. c. p. 334, tab. VI 7589 fig. 29-30- Cellulis (temp. 25°) plerumque limoniformibus, nonnullis

etiam ellipsoideis, omnibus vacuolis magnis praeditis, 6-10  $\mu$  cr.; ad temp.  $35^{\circ}$  fortiter incrassatis et plus minus elongatis usque ad  $40 \times 6$ ; temp. gemmationi apta: maxima  $37^{\circ}\text{-}38^{\circ}$ , minima  $6^{\circ}\text{-}3.5^{\circ}$ .

Hab. ad terram, Ste Croix (Antillae Danicae), sed characteres ex cultura in musto cerevisiae.— Inducit fermentationem in dextrosio, levulosio, d-mannosio et parum in saccharosio et maltosio.

15. Pseudosaccharomyces indicus Klöck., l.e. p. 335, tab. VII fig. 31-32. 7590
 Cellulis (temp. 25°) limoniformibus, ellipsoideis v. elongatis, 3-7 μ
 long., ad temp. 35° plerumque conformibus sed majoribus; temp. gemmationi apta: maxima 37°-38°, minima 4°-3°.

Hab. ad terram, in Hymalaya Asiae, sed characteres ex cultura in musto cerevisiae. — Inducit fermentationem in dextrosio, levulosio, d-mannosio, saccharosio et parum in maltosio.

#### MYCODERMA Pers. - Syll. XXII p. 781.

1. Mycoderma Lebenis E. Rist et J. Khoury, Etudes sur un lait fermenté commestible, le « Leben » d' Egypte p. 79, in Ann. Inst. Pasteur XVI, 1902, p. 65-84. — Cellulis singulis cylindraceis 6-12 μ long. 3 μ circ. crassis (quandoque utrinque biscoctiformi inflatis), saepe in filamentis myceliformibus congregatis et tunc angusticibus, 33 μ et ultra long. 1,5-2 μ tantum crassis; gemmulis lateralibus catenulis consimilibus efformantibus, ex angulo recto orientibus; plasmate granuloso saepe vacuolis praedito.

Hab. in lacte fermentato « leben » dicto, Aegypto.

2. Mycoderma Chevalieri Guillierm. in Ann. Sc. Nat., Botan., sér. IX, 7592 t. XIX (1914) p. 19 fig. 2 et tab. 5. — Cellulis initio solitariis. vel geminatis, cylindraceis, 4-14 × 3-5, apicibus tantum gemmantibus, dein, senescendo, elongatis, dendroideo-consociatis, pseudomycelialibus, 25-30 μ longit. etiam attingentibus; sporis nullis.

Hab. in vino e rhizomate Zingiberis officinalis parato, Africa occident. (CHEVALIER).

## \*) DEBARYOMYCES Klöcker — Syll. XXII p. 786.

1. Debaryomyces tyrocola Konokotine, Bull. Jard. impér. Bot. St. Pé-7593 tersbourg XIII (1913) p. 36, cum ic. et tab. 4 pp.; Bot. Centralbl. 1913 vol. 123. p. 620; Deux nouvelles levures à hétérogamie etc.,

<sup>\*)</sup> Formae complures anonimae hujus gén. describuntur in: CESARI et GUIL-LIERMOND, Les Levures de sancisson in Ann. Inst. Pasteur, 34., 1920, pp. 229-248, cum icon.

Bull. trav. École de Medicine des femmes de St. Petersbourg, 1913.— Fermentatione in culturis nulla, saccharosium tantum invertitur. Formae 4 ex magnitudine sporarum et characteribus culturae distinguuntur.

Hab. in caseo batavico, in Rossia.

2. Debaryomyces Klöckerii Guilliermond et Péju, Bull. Soc. Mycol. de 7594 Fr. XXXVI, 1920 p. 164, tab. VI-X (absque diagnos.). — Cellulis rotundatis v. subellipsoideis, solitariis v. parce gregariis, aliis saepe torulose dispositis; aliis mycelium parcum ramosissimum subflabellatum efformantibus; copulatione heterogamica; ascis 1-4 sporis; ascosporis parietibus crassis verrucosulis donatis, 2 μ circ. cr.

Hab. ex macula anginae in pharinge hominis, Gallia. — Fungus inter Endomycetaceae et Saccharomycetaceae medius. Proximus etiam Endomycete javanico Klöcker.

NECTAROMYCES Sydow n. nov., Ann. Mycol. 16., 1918, p. 244 (absque diagn.). — Syn. Anthomyces J. Grüss 1917 nec Dietel 1899.

1. Nectaromyces Reukautii (Grüss) Sydow, 1. c. p. 244, Anthomyces Reu- 7595 kautii Grüss, Ber. deutsch. bot. Ges. 35. (1917) 1918, p. 746, cum icon. et tab. (absque diagn).— Cellulis ellipsoideis v. subglobosis, dein copiose gemmantibus et tunc coloniis undique effusis efformantibus, saepe initio substellatim radiantibus.

Hab. in floribus melliferis Salviae, Lamii, Fritillariae, Linariae, Lonicerae etc.

NADSONIA Syd. -- Syll. XXII p. 786.

Nadsonia elongata Konokotine in Bull. Jard. impér. Bot. St. Péter-7596 sbourg XIII (1913) p. 32, cum ic. et tab. 4 pp. — Bot. Centralbl. 1913 vol. 123. p. 620; Deux nouvelles levures à hétérogamie etc. Bull. Trav. École de Medicine des femmes de St. Petersbourg, 1913. — Cellulis ovoideis, ante copulationem (ex macro-et microgametis) magis elongatis; sporis in asco efformatis demum liberis et vegetative vigentibus. — Inducit fermentationem in dextrosio et levulosio sed non in saccharosio, lactosio et maltosio.

Hab. ex muco gummoso Betulae, in prov. Smolensko.

HANSENULA Sydow, Ann. Mycol. 17., 1919, p. 44, nom. nov. — Syn. 7597 Willia E. Ch. Hansen 1904 nee C. Müll. 1899. — Syll. XVIII p. 786. — Typus gen. Hansenula anomala (E. Ch. Hans.) Sydow. PICHIA E. Ch. Hans. - Syll. XVIII p. 198, XXII p. 787.

Pichia polymorpha Klöcker, Centralbl. f. Bakt II Abt. 35., 1912, 7590 p. 373; C. R. Trav. Labor. de Carlsberg v. X. 1913, p. 215, tab. I fig. 4-5. — Cellulis ovoideo-ellipsoideis usque ad 13 μ long. sed maxime variabilibus; sporis endogenis sphaeroideis 4 μ circ. cr. sed raro inventis; temper. ad multiplicationem cellularum apta, maxima circ. 39.°, minima 0,5 et infra.

Hab. characteribus ex cultura in cerevisia, sed ad terram inventa, Dania.— Coeteri characteres biologici et culturales in Klöcker l. c. reperiuntur.

2. Pichia Gentianae H. Guyot, Bull. Soc. bot. Genève, 1916, p. 309 7599 f. XX-XXI.— Cellulis rotundatis v. ovalibus, 3-12 \* 3-5; velo albo, farinoso, in liquido nutricio membranam faciente; coloniis juvenilibus hemisphaericis, cremeis, apice flavidis; gigantibus depressis, centro papillatis.

Hab. in fermentatione radicis Gentianae luteae, ex Jura Helvetiae.

3. Pichia juratensis H. Guyot, Bull. Soc. bot. Genève, 1916, p. 311.—. 7600 Cellulis ovalibus 3,5-5 \* 3-7; velo albo farinoso; sporis tetraedrice dispositis in ascis medio dehiscentibus; cellulis perennantibus haud raris.

Hab. in fermentatione radicis Gentianae luteae, Jura Helvetiae.

4. Pichia suaveolens Klöcker, Centralbl. f. Bakter. etc. II Abt., 35., 7601 1912, p. 371; C. R. trav. Labor. de Carlsberg v. X, 1913, 2. Livr. p. 211 tab. I fig. 1. — Cellulis sphaeroideis v. ovoideis 5-8 μ cr.; sporis endogenis subglobosis v. parum depressis plerumque binis 2 μ circ. cr.; temper. ad multiplicationem cellularum apta, maxima 34°-36°, minima 10-4°; ad productionem sporularum, maxima 29°-33°, minima circ. 10°.

Hab. characteribus ex cultura in substentaculo cerevisiae, sed ad terram inventa, Dania.— Coeteri characteres biologici et culturales in Klöcker I. c. reperiri potes.

5. Pichia Calliphorae Klöcker, Centralbl. f. Bakter etc. II Abt. 35., 7602 1912, p. 374; C. B. Trav. Labor. Carlsberg v. X, 1913, p. 216, tab. I fig. 6.— Cellulis cylindraceo-ellipsoideis usque ad 13 μ long. raro sphaeroideis; sporis endogenis 2-4 plerumque inter se concretis et tunc aegre formam ostendunt; temper. ad multiplicationem cellularum apta, maxima 33°-35°, minima 4°-0.5°, ad productionem sporularum, maxima 24°-27°, minima 10°-7°.

Hab. characteribus ex cultura in cerevisia, sed in corpore muscidae Calliphorae erythrocephalae inventa species; Carlsberg. — Caeteri characteres biologici et culturales in Klöcker 1. c. reperiuntur.

6. Pichia alcoholophila Klöcker, Centralbl. f. Bakter., II Abt. 35., 1912, 7603 p. 372; C. R. Trav. Labor. de Carlsberg, v. X, 1913, 2. Livr. p. 213, tab. I fig. 2-3.— Cellulis ovoideo-elongatis magnitudine variabilibus 6-9 µ long., demum sphaeroideis, sporarum endogenarum, saepius quatuor sphaeroideis, plerumque 1,5.2 µ cr.; quandoque cellulis magnis 16-17 µ long, et ultra et tunc usque 15 sporulas endogenas generantibus; temper. ad multiplicationem cellularum apta, maxima 33°-35°, minima 8°-4°, ad productionem sporularum, maxima 29°-33°, minima 4°-0,5°.

Hab. characteres ex cultura in cerevisia, sed ad terram inventa, Dania. — Caeteri characteres biologici et culturales in Klöcker l. c. reperiuntur.

## ZYGOSACCHAROMYCES Baker — Syll. XVI p. 818, XVIII p. 198, XXII p. 787.

- 1. Zygosaccharomyces mellis acidi v. Richter, Mycol. Centribl. I (1912) 7604 p. 67 c. ic. — Cellulis minutis, sphaeroideis vel breviter ellipsoideis, 3-4  $\mu$  diam., raro usque ad 5,5  $\mu$ , copiose gemmantibus (opt. temper. 30°-35°) et colonias variae magnitudinis efformantibus; sporis post copulationem duarum cellularum orientibus, globosis, 3,5-4,5 µ diam.; fermentationem energicam in glucosio, fructosio et saccharosio inducit, tenuem in galactosio, nullam in maltosio, lactosio et raffinosio: quibus characteribus a caeteris speciebus distinguitur. Hab. in melle acido, Gouv. Kaluga, Rossia.
- 2. Zygosaccharomyces Chevalieri Guillierm. in Annal. Sc. Nat., Bot., 7605 sér. IX t. XIX (1914) p. 11, fig. 1 et tab. 3.— Cellulis minutis, sphaeroideis vel ovatis, raro cylindraceis, 4-8 × 2-6, solitariis vel geminatis, interdum senescendo colonias pseudomyceliales efformantibus; sporis in quoque asco e copulatione heterogamica 1-4, raro pluribus, interdum parthenogenetice ortis, subhemisphaericis, lateraliter apiculatis, hyalinis, 1,5-2,5 µ latis, centro granulum refringentem praebentibus.

Hab. in vino [vin de Bili] e tuberculis Osbeckiae grand i f l o r a e parato, Conakry, Guinea gallica, Afr. (CHEVALIER).

3. Zygosaccharomyces Pastori Guilliermond, Bull. Soc. Mycol. de Fr., 7606 XXXVI, 1920, p. 203, tab. XI-XIII (absque diagnos.). - Fun-

gus copulatione heterogamica donatus; aseis 1-4-sed plerumque tetrasporis, sporidiis minutis 1 µ eire. er., hyalinis grosse uniguttulatis, hemisphaericis (ut in gen. Willia).

Hab. in flusso mucoso Castaneae (maronnier), Coluire prope Lugduni, Gallia (CARRON).

4. Zygosaccharomyces Nadsonii Guillermond, Bull. Soc. Mycol. de Fr. 7607 XXXIV, 1918, p. 111, tab. IV-VII (absque diagn.).— Species saepe conjugatione heterogamica donata; cellulis ovoideis v. rotundatis, primum solitariis v. parce gregariis demum plerumque aggregatis et plus minus elongatis et colonias efformantibus; ascosporis rotundatis 1-v. pluriguttulatis.

Hab. in mixtura cocta a urantii, Lugduni, Gallia.

5. Zygosaccharomyces Chodati H. Guyot, Bull. Soc. bot. Genève, 1916 7608 p. 304, fig. V-VII. — Cellulis elongatis, apice angulosis, lateraliter asperis, subque triangularibus 5-20 \* 5, v. ovalibus, 5-12 \* 5; crassamento in liquido uniformi; sporis 1-6 in catenam v. tetraedrice dispositis.

Hab. in fermentatione radicis Gentianae luteae, ex Jura Helvetiae.

### NEMATOSPORA Peglion — Syll. XVIII p. 435.

1. Nematospora Lycopersici A. Schneider in Phytopath. VI (1916) p. 7609 395 (icon.), VII (1917) p. 52 (diagn.). — Cellulis vegetativis ellipsoideis, ovatis vel filamentosis, non ramosis, apicibus gemmantibus; ascis cylindraceis, utrinque rotundatis, 60-70  $\mu$  longis; sporis octonis, in struibus binis tetrasporis confertis dispositis, anguste fusiformibus, medio 1-septatis,  $50 \times 4.5$ , apice altero flagello filiformi, undulato, 50-100  $\mu$  longo ornato; arthrosporis plerumque sphaeroideis, 25  $\mu$  diam.

Hab. in fructibus Lycopersici esculenti, California, Cuba, Mexico.

MEDUSOMYCES G. Lindau, Ber. deutsch. Bot. Ges. Bd. XXXI, 1913, p. 247 (absque diagnosi).

1. Medusomyces Gisevii G. Lindau, l. c. p. 247, tab. XI (absque diagnosi). — Cellulis  $5.5 \cdot 8.5 \times 1.5 \cdot 3.8$ , gemmantibus plerumque 7-11, raro 11-14  $\mu$  long., 1.5-3.8 cr.

Hab. in infusione fermentescenti Theae, in Germania et Rossia.—Cfr. L. Lindner, 1. c. p. 364, ubi de fungo Lindauano critice disseritur.

MONOSPORELLA D. Keilin, A new Saccharomycete, Monosporella unicuspidata n. g. n. sp. parasitic in the body cavity of a Dipt. larva, Dasyhella obscura, in « Parasitology » 12., 1920, n. 1., pp. 83-91.— Monospora Metschnikoff 1884 nec Hochstetter 1841 (Flocourtiaceae et syn. Trimeriae Harv. 1831), nec Solier 1845 (Algae).— Sacc., Syll. XVIII p. 198, XX p. 109.

1. Monosporella bicuspidata (Metschn.) D. Keilin, l. c., fig. I, nec M. cu 7611 spidata ut Auct. plur. et Syll. XX p. 109. — Asci uno apice tantum leniter angustati; sporae utrinque acuminatae.

Hab. parasit. in corpore Daphniae magnae (Crustacea), Europa media (METSCHN.), nec non in Horto bot. Parisii, Gallia (KEILIN).

2. Monosporella unicuspidata D. Keilin, l. c. fig. II.— Primum cellulis 7612 vegetativis parvis ovoideis 4-10  $\mu$  long. uno apice gemmantibus, gemmulis plerumque singulis raro 2-3 efformatis dein secedentibus v. quandoque diu connexis; demum cellulis magis elongatis usque  $30 \times 2,5$  et ascum efformantibus; ascis elongatis sed regularibus,  $30.40~\mu$  long, membrana uno apice incrassata; sporis 24-35  $\mu$  long. uno apice tantum longe acutatis altero rotundato-truncatis et 1,8  $\mu$  cr.

Hab. in cavitate corporis Dasyhellae obscurae Winn. (Diptera), Cambridge, Auglia.— Huc pertinent verisimiliter (v. solum generice) etiam Monosporella sp. in corpore Tylenchi pellucidi Bast. (Vermes) (Bütschli 1876, Abhandl. Sencken. naturf. Ges. X, 148, tab. XIV fig. 8), Monosporella (?) sp. in corpore Potamillae torelli (Vermes) (Caullery et Mesnil 1911, Bull. Sci. Fr. et Belg. XLV, p. 89).

# Fam. 25. \*) Protomycetaceae DE BARY, s. l.

PROTOMYCES Ung. — Syll. VII p. 319, IX p. 363, XI p. 251, XIV p. 829, XVIII p. 202, XXII p. 789.

Protomyces crepidicola G. v. Büren, l. c. 1922, p. 47 et 57, fig. 10 7613
 tab. II fig. 4.5.— Pr. Crepidis G. v. B., l. c. 1915, p. 83 p. p., nec

<sup>\*)</sup> Cnfr. Günth. v. Büren, Die schweizer. Protomycetaceen, in Beitr. z. Kryptogamenfl. d. Schweiz, Bd. V, H. 1., 1915, 95 p., 28 fig., 7 tab.; Weitere Untersuch. üb. Entwicklungsgesch. u. Biol. d. Protomycetaceen, l. c., H. 3, 1922, 94 pag., 27 fig., 2 tav.

Prot. Crepidis (Jaap) Syll. XXII p. 789 (Protomycopsis!) — Chlamydosporis in mycelio intercalariter nascentibus, circ. 37  $\mu$  diam., sporangiis longissimis 105-135  $\mu$  vel quandoque etiam longioribus, 34  $\mu$  latis, saepe aliquantulum inflexis.

Hab. in foliis vivis Crepidis biennis (Compositae), in venis foliorum tumescentibus, et interdum rubidis, in Europa media.

Protomyces Crepidis paludosae G. v. Büren, l. c. 1922. p. 52 et 58, 7614
 fig. 11.— Prot. Crepidis G. v. B., l. c. 1915, p. 83 p. p., nec Protom.
 Crepidis (Jaap) Sylloge XXII p. 789 (Protomycopsis!).— Chlamydosporis in mycelio nascentibus, circ. 45 μ diam.; sporangiis 60-75 × 50; membrana sporarum fusca.

Hab. in caulibus vivis et in nervis foliorum Crepidis paludosae (Compositae), intumescentias efformans, Europa media.

3. Protomyces Helminthiae Maire, Bull. Soc. Hist. Nat. Afrique du Nord, 765 t. VI, 1914, p. 255, fig. 1. — Maculis brunneolis, bullatis (superne convexis), incrassatulis; sporocystis in acervis nervisequiis dense aggregatis, plus minusve catenatis, subglobosis, 30-50 μ diam., tunica 5-6 μ crassa, e hyalina dilute brunneola laevi praeditis. —

Hab. in foliis vivis Helminthiae echioidis L. (Compositae), Djebel Bou-Konrnin, Tunisia, Africae bor.

4. Protomyces kriegerianus G. v. Büren, l. c. 1922, p. 41 et 56, fig. 8 7616 tab. II fig. 3.— Prot. kreuthensis Auct. et Krieger (nec Külm), Fungi saxon. exs. f. IV (an. 1887) n. 251. — Chlamydosporis in mycelio intercalariter nascentibus, circ. 45 μ diam., membrana 3 μ circ. cr.; sporangiis 50-55 × 48-50.

Hab. in foliis vivis Leontodontis hispidi (Compositae), praecipue in fasciculis vasorum, quo venae foliorum conspicue apparent et loca infecta plerumque subrubent, Europa media.

5. Protomyces Picridis G. v. Büren, l. c. 1922 p. 44 et 56, fig. 9.— Chla-7617 mydosporis in mycelio intercalariter nascentibus, circ. 40  $\mu$  diam.; sporangiis  $60-65 \approx 45$ .

Hab. in foliis vivis Picridis hieracioidis (Compositae), quo venae foliorum valde tumescunt, Europa media.

Protomyces Sonchi Lindfors, Svensk bot. Tidskr. XII, 2., 1918, p. 7618
 221, cum icon.— F. sp. Prot. pachydermius Thüm., G. v. Büren 1. c.
 1922 p. 37.

Hab. in foliis vivis Sonchi oleracei (Compositae), Europa media et bor.

7. Protomyces? Cocae Spegazz., An. Soc. Cient. Argentina, t. 90., 1920, 7619

p. 29. — Maculis amphigenis sordide fuscescentibus v. rufescentibus magnitudine ludentibus indeterminatis, 2-10 mm. diam.; sporis saepius solitariis, rarius trinis v. senis in quaque cellula, e globoso ellipsoideis, mediocribus, levibus, tenuiter tunicatis, primo hyalinis serius fumosis, non v. grosse 1-guttulatis, 8-12 µ diam.

Hab. in foliis Erythroxylii Cocae (Erythroxylaceae), Rep. Argentina sept. andina, America austr.

- 8. Protomyces macrosporus Ung. Syll. VII p. 319. Secundum G. 7620 v. BÜREN (l. c. 1922), ad hanc spec. adscribendae sunt f. sp. sequentes (in Umbelliferis) biologice tantum distinguendae:
  - f. sp. Aegopodii, f. sp. Heraclei, f. sp. Chaerophylli, f. sp. Cicutariae, f. sp. Carvi, f. sp. Ligustici, f. sp. Laserpitii (\pm f. sp. Laserpitii latifolii G. v. Bür. olim).
- Protomyces inundatus Dangeard, Le Botaniste IX, 1903-1906, tab. 7621
   XVII-XVIII. G. v. Büren, Mitt. Naturf. Gesellsch. Bern. 1917
   (1918) pp. 109-132 cum tab. I, et l. c., 1922, p. 23.

Hab. in Apio nodifloro (Umbelliferae), in Gallia et Helvetia. — Ob characteribus germinationis potius ad gen. Volkartia (Taphridium) referenda species (cnfr. G. v. Büren, 1. c. 1915 p. 88, et 1922 p. 25.

10. Protomyces? fallax Sacc.— Syll. VII p. 320 — var. abellinensis Saccardo in Saccardo e Trotter, I Funghi dell'Avellinese, Avellino 1920, p. 108. — Sporis perfecte globosis, 15-19 μ diam., levissimis, episporio crassiusculo 2 μ, nitido, nucleo farcto e hyalino dilutissime chlorino; sporis saepius acervulatis intra pycnidia Diplodiae, saepe mueillo quodam achroo innatis.

Hab. in pycnidiis Diplodiae Castaneae var. corticolae, Avellino, Italiae merid. — A typo videtur distingui episporio fuscello sporisque denique totis fuscellis, nec non matrice in Sphaeropsid. ad folia pinea.

11. Protomyces Kemneri Lindfors, Svensk Botan. Tidskr. XII, 2., 1918, 7623
n. 2, pp. 224-226, enm icon. 2-3.— Sporis globosis v. late ellipsoideis c. 40 μ diam. (32-44 μ), episporio 3 μ cr., brunneo praeditis; ascis non erumpentibus, ascosporis rotundatis 7 μ diam. hyalinis.

Hab. in caulibus noduloso-incrassatis nuculae ed instar Orobituberosi (Leguminosae), ad « Experimentalsältet », Sueciae (KEMNER).

PROTOMYCOPSIS Magnus, Pilzflora v. Tirol, 1905 p. 322.— G. v. Büren l. c. 1915 p. 84; 1922 p. 59.— A Protomyces morphologice vix

diversum, differt tantum chlamydosporis in mycelio terminalibus (nec intercalaribus), exosporio verruculoso nec levi.

Protomycopsis Bellidis (Krieger) P. Magnus in G. v. Büren, l. c. 76
 1915 p. 85 fig. 27. — Protomyces Bellidis Krieger, Hedwigia 1896 (Repertor.) p. 144. — Sporangiis 30-45 μ diam., membrana 3 μ cr., minute yerruculosa.

Hab. in foliis Bellidis perennis (Compositae), Helvetia, Tirolia.

2. Protomycopsis Chrysanthemi G. v. Büren, l. c. 1922, p. 60 et 76 762 fig. 12-15.— Mycelio in parenchymate foliorum et quandoque etiam in venis effuso; chlamydosporis in mycelio terminalibus, membrana juventute verruculis praedita; sporis maturis forma valde irregularibus circ. 36 μ diam., membrana 4.5 μ crassa; sporangiis 50-60 μ longis 50 μ latis.

Hab. in foliis vivis hinc inde parum tumefactis Chrysanthemi alpini (Compositae), Helvetia.

3. Protomycopsis Leucanthemi Magnus, Pilzflora v. Tirol 1905, p. 323.— 76%
G. v. Büren l. c. 1915 p. 84 fig. 26, tab. VI-VIII; l. c. 1922 p. 63
et 76, fig. 16, tab. II fig. 6. — Sporangiis 52-62 \* 37-48.

Hab. in foliis vivis Chrysanthemi Leucanthemi et Chr. atrati (Compositae), Europa media.

4. Protomycopsis Hyoseridis Sydow, Ann. Mycol. XII, 1914, p. 197.— 7627 Maculas flavidas leniter bullatas rotundatas 2-3 mm. latas efformans; ascis globosis usque late ellipsoideis, 25-38 μ diam., tunica 4-6 μ crassa flavidula; sporis maturis non visis.

Hab. in foliis Hyoseridis baeticae (Compositae), Taormina Siciliae (Gysperger). — A P. Leucanthemi (Syd.) P. Magn. aseis minoribus diversa.

Protomycopsis Leontodontis G. v. Büren, l. c. 1922, p. 67 et 76, fig. 7628
 17-18. — Chlamydosporis in mycelio terminalibus, membrana levi brunnea praeditis, circ. 45 μ diam.; sporangiis usque 105 μ long. et ultra, 30 μ latis.

Hab. in foliis vivis et in nervo medio hine inde tumefactis Leontodontis autumnalis (Compositae), in Helvetia, et Saxonia (Krieger, Fungi saxon. exsice. fasc. XIII, 1891, n. 601).

6. Protomycopsis Arnoldii Magnus , Pilzflora v. Tirol, 1905, p. 322.— 7629 G. v. Büren, l. c. 1922, p. 71 et 76, fig. 19-20, tab. II fig. 7.— Chlamydosporis terminalibus, membrana levi praeditis, circ. 39-48 (33-54)  $\mu$  diam.; sporangiis subglobosis 45-60  $\mu$  long. et latis.

Hab. in foliis et in nervo medio hinc inde fuscis et tumefactis

Leontodontis montani (Compositae), Europa media.

7. Protomycopsis pharensis Jaap, Ann. Mycol. 14., 1816, p. 4. — Soris 7630 tumefacientibus, copiesis, e griseo brunneolis, subrotundis, 1-2,5 mm. diam., leviter prominulis; sporis globosis v. late ellipsoideis 30-50 × 28-40, membrana pallide flava v. brunneola, 2-5 μ cr., praeditis, intus grosse granulosis, crasse et breviter stipitatis.

Hab. in foliis vivis Pallenis spinosae (Compositae), pr. Lesina Dalmatiae.

MONASCUS van Tiegh. - Syll. IX p. 373, XIV p. 825, XXII p. 791.

1. Monascus Paxii Lingelsh., Hedw. 57., p. 253 (1916).— Mycelio valde 7631 effuso, septato, pseudodichotome ramoso, hyphis repentibus 4-8 μ cr., hine inde breviter vesiculoso-dilatatis, et tunc 10 μ cr.; hyphis fertilibus tenuioribus, nunc conidia nunc sporangia gerentibus; conidiis solitariis vel 8-10 catenulatis, plerumque late piriformibus et basi applanatis, rarius globosis, 8-10 μ diam.; sporangiis sphaeroideis, membrana 3-4 μ crassa instructis, 40-60 μ diam., pedicellatis, pauci-vel polysporis; sporidiis ovoideis 6 × 4.

Hab. in ramulis et foliis emortuis Cluytiae robustae et C. brachyadeniae (Euphorbiaceae), ad Irakuet in monte Gurui, Afr. or. (JAEGER). — Mycelium et perithecia nunc hyalina nunc rubrescentia.

ENDOGONE Link.— Syll. VIII p. 905, XIV p. 829, XVI p. 816, XVIII p. 203.

Endogone neglecta Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7632 1917. (1918) p. 107. — Parva, plerumque 3-6 mm. lata, subglobosa, pallida, plerumque superficialis raro submersa, carnosa v. parum ceraceo-floccosa, peridio crasso, intus ascigero; ascis sphaeroideis 30-50 μ diam., pallide viridibus v. hyalinis, levibus.

Hab. ad ligna trita emortua, M. Wellington, Tasmania. — A Endog. australi ob exiguitate diversa.

2. Endogone Torrendii Bresadola, Ann. Mycol. 18., 1920, p. 55, et in 7633 Torrend, Fungi selecti exsice. n. 159 (1913). — Ascomata reniformia vel pulvinata, alba, dein straminea, pubernla, 5-8 mm. longa, 3-5 mm. lata, substantia alba, minute granulosa absque cellulis; ascis globosis vel subglobosis, 75-100 μ diam. vel 90-95 × 80, plurisporis; sporidiis hyalinis globosis vel obovatis, interdum angulatis, granuloso-farctis, 15-21 × 15-17.

Hab. ad folia mucida arbor. frond., Lusitania (Torrend). - Obs.

Endogonae reniformi Bres. valde similis, sed notis carpologicis diversa.

PAUROCOTYLIS Berk. - Syll. VII p. 152, XVII p. 243 (in Lycoperdaceis).

1. Paurocotylis niveus Rodway, Pap. a. Proc. R. Soc. Tasmania f. 765 Year 1919 (1920), p. 115 .- Hypogaea v. emergens, globosa, pure alba, 3-6 mm. diam., contextu denso tenaci canaliculis irregularibus praedito; ascis globosis, 30-50 μ, numerosis, lon ge stipitatis; sporidiis singulis in quoque asco, globosis, crasse echinulatis, 16 µ diam., episporio vere firmo.

Hab. ad terram, Cascade Hobart, Tasmania.

#### INCERTAE SEDIS

- PLENOPHYSA Sydow, Ann. Mycol. 17., 1919, p. 142.— Corpuscula solitaria, minuta, superficialia, astoma, subiculo nullo, glabra, applanata, extus pellicula tenui et tenaci subpellucida circumdata, intus sporulas subglobosas vel ellipsoideas continuas hyalinas in massa gelatinosa ortas includentia, membrana basali tenuissima hyalina.
- 1. Plenophysa mirabilis Sydow, l. c. Corpuscula epiphylla, sparsa, 7635 solitaria, applanata, orbicularia, 300-400 µ diam., atra, in sieco rugulosa, pellicula tenui tenaci subpellucida fuscidula vel griseo-brunnea haud structosa circumdata; sporulae in massa gelatinosa e fibris tenuissimis formata ortae, leves, 11-14 × 8-11.

Hab. in foliis vivis vel subvivis Fici elasticae, et Zeae Maydis, College Garden, Canton, Kwangtung prov. Sinarum (O. A. REINKING).

- ENDOGONELLA v. Höhn. in Sitzungsb. Akad. Wiss. Wien, CXXII, 1, p. 294 (1913). - Etym. ab Endogone cui analogum genus. - Epigaea. Sporocarpi tenues, initio cupulati, margine incurvo, dein tuberiformes, intus cavi, superne aperti. Chlamydosporae in stratum medium parietis sitae, globosae, acrogenae. Zygosporae et sporangia non visa. Contextus parietis in zona media sporifera laxe plectenchymatico, superne et inferne pseudoparenchymatico.
- 1. Endogonella borneensis v. Höhn., 1. eit., p. 295, fig. 4.— Sporocarpo 7636 inflato, tuberiformi, irregulari, plerumque elongato, superne aperto cavo, 24-42 mm. longo, pariete 1-2 mm. crassa, colore (in alcohole servato) luteo-brunneo, superficie levi vel tenuiter scabro, sulcato-

lobato, rima angusta, labiis incurvis vel involutis limitata apertis; contextu 1-2 mm. crasso, laxe plectenchymatico ex hyphis hyalinis, septatis, tenui-tunicatis, 4-7 µ er. composito, utrinque zona 100-200 μ crassa, parenchymatica, e cellulis 10-20 μ diam. composita limitato; chlamydosporis in zona mediana excipuli sparsis globosis, vel globoso-ovoideis,  $330-400 \times 260-330$ , tunica stratosa  $24-31~\mu$ crassa praeditis, contentu denso, granuloso.

Hab. ad terram in ins. Borneo.

MENEZESIA Torrend in Broteria, ser. Bot. IX (1913) p. 172. - Etym. a cl. C. DE MENEZES. - Ascomata turbinata, tenuiter corticata. Gleba continua, granuloso-ceracea, succosa, corpusculis clavatis (paraphysibus?) a sporis indipendentibus repleta.

1. Menezesia setulosa Torr., loc. cit., fig. 6. - Ascomatibus albis, tur- 7637 biniformibus, 300-500 \mu longis, in pseudostipitem sensim attenuatis, setulis 160-120 \times 4-9, ad modum vaginae longam lineam protoplasmatis centralem involventibus ornatis; paraphysibus (?) numerosissimis, glebam fere totam constituentibus, clavatis, polymorphis,  $45.55 \times 8.12$ , granulosis, interdum hyphis septatis  $20.30 \times 3.4$ commixtis; sporis hyalinis, granulatis, sphaericis, 10-12 µ diam. ad basim paraphysarum ortis, catenulatis, raro singularibus. Ascis non visis.

Hab. ad ramos putrescentes Hederae, Monte, ins. Madera (C, DE MENEZES).

AGOSTAEA (Sacc.) Theiss. et Syd., Ann. Mycol. 13., 1915, p. 359 et 668. — Agostaea Sacc., Syll. XI p. 293 (ut Sectio Trabutiae). — Diagn. sec. Theiss. et Syd., l. c.: Ascomata foliicola, hemisphaerica, superficialia, centro affixa, hypostromate epidermali; stroma hypotheciale ex hyphis radiantibus mucose coalitis inque cellulas singulas discendentibus formatum. Hymenium periphaericum muco involutum, extus hyphis paucis demum absorptis tectum. Asci clavati, octospori, paraphysati. Sporae clavatae, 4-cellulares.

1. Anostaea Lantanae (P. Henn.) Th. et Syd., l. c., Trabutia Lantanae 7638 P. Henn., Syll. XI p. 293.

### DIORANOTROPIS (Auct. ?)

1. Dioranotropis vastatrix (Auct.?), Revue Agricole Rennion N. 6, 1900, 7639 pp. 1-15; Exper. Station Record Washington U. S. A., 1900-1901, 12., p. 261.

#### APPENDIX

Addenda ad vol. XXIII-XXIV

## HYMENOMYCETAE

### Agaricaceae

Claudopus tomentellicola v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 7640
 1917, p. 247 (nomen nudum). — Leptoniae parasiticae proxima species (cnfr. Fragmente z. Mycol. 1002, in Sitzb. k. Ak. d. Wiss. Wien 1917).

### Polyporaceae

2. Polyporus sclerotinius Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7641 Year 1917 (1918) p. 108. — Sclerotiis oblongis v. subglobosis 2-3 cm. diam., albis, dense medullosis v. suberosis, ex hyphis dense intertextis efformatis; sporophoris crectis dimidiatis 2 cm. circa altis, caespitosis, e stipite infra singulum orientibus, superficie pilei supra nigra levi v. longitudinaliter striata, infra alba; poris irregularibus, 0,2 mm. circ. cr., dissepimentis subobtusis.

Hab. ad terram, in editioribus Mr. Field, Tasmania.— Pol. myllitae C. et M. proximus a quo differt statura minore, pileo nigro et sclerotiis omnino diversis.

3. Polyporus undulatus Torrend, Broteria, Bot. v. XII, 1914, fasc. I, 7642 p. 58, fig. 1 (Fungi sel. exs. 230). — Pileo carnosulo-cartilagineo, albescente, umbilicato, stipitato, margine undulato interdum crispo, azono, 2-5 cm. lato 1-raro 2-pileato; poris minutis, sordide albis v. cinerascentibus; stipite glaberrimo, 2-4 cm. longo, ad basim saepius incrassato v. bulboso, in parte superiore in pileum sensim dilatato, sporis non visis.

Hab. ad terram arenosam, Zumbo Mozambique, Africa (A. CRUZ).

4. Polystictus cearensis Theiss., Broteria, Bot., v. XII, 1914, fasc. I 7643 p. 30. — Basi resupinata, pilei numerosis seriatim reflexis, 1-2 cm. longis et latis, flabelliformibus, rigidis, glabris, in facie superiore ad basim brunneo-atris, marginem versus dilutius brunneis, acie acuta albo-flavida, zonis alternis, obscuris et laete brunneis pictis. Hymenio griseo-albido, poris minutissimis 9 pro mm. angulatis.

Substantia pilei albida, tenaci, ad basim 1 mm. crassa marginem versus attenuata. Pori elongati, infra usque 2 mm. longi, supra breviores. Sporae non observatae.

Hab. in ligno corticato, Cearà Brasiliae (DIAS DA ROCHA).

5. Polystictus hydnoporus Theiss., Broteria, Bot. v. XII, 1914, fasc. I, 7644 p. 31.— Pileis luteo-albidis, unicoloribus, dense seriatis, sessilibus, 2-3 cm. latis, 1-1,5 cm. altis, in facie superiore obsolete concentrice zonatis v. costatis, marginem versus sericeo-hirtellis, tenui-coriaceis in sicco fragilibus. Substantia concolore, vix 1 mm. crassa. Poris 3-4 pro mm., angulato-rotundatis, acie non acuta; totum hymenium fusco-stramineum. Pori nonnisi primâ juventute integri; mox a basi versus peripheriam resolvuntur daedaloidei, dein in aculeos singulos hydnoideos 2 mm. longos, integros v. varie fissos. Sporae non observatae.

Hab. in ligno corticato, Cearà, Brasilia (DIAS DA ROCHA).

6. Polystictus rugosissimus Torrend, Broteria, Bot., vol. XII, 1914, p. 7645 56 (Fungi sel. exs. 219). — Pileo coriaceo membranaceo, gibboso-undulato, zonato, ex minutis fimbriis coalescentibus erectis hirsuto-exasperato, sordide fulvo v. cinerascente; poris prius daedaloideis, dein minutis, saepius ex hymenio undulato irpeoideis. Sporis non visis.

Hab. ad truncos, Boroma, Mozambique, Africa (C. WITZ). — Ex grege Polysticti gibberulosi Lév. sed valde diversus.

7. Hexagonia zambeziana Torrend, Broteria, Bot. v. XII, 1914, fasc. I, 7646 p. 58 (Fungi sel. exs. 238).— Rigida; pileo 3-5 cm. lato, 2-15 mm. crasso valde rugoso, fibrillas in substantia suberosa agglutinatas simulante, ex atro cinerascente, zonato; zonis quibusdam prominulis, saepius nigris, ad marginem albescentibus; poris purpureocinereis, majoribus 1-2 mm. diam., profunde incisis, 1-3 mm. altis. Sporis non visis.

Hab. ad truncos, Zumbo, Mozambique, Africa (A. CRUZ).

### Hydnaceae

8. Odontia incrustans Speg., An. Soc. Cient. Argent. 90., 1920, Extr. 7647 p. 16. — Latissime irregulariterque effusa (1-10 cm.), tenuis, incrustans ac conglutinans, matrici utrinque arctissime adnata, non marginata, primo candida, per actatem, medio praecipue, ochroleuca cinerascens v. isabellina, granulis minutissimis (200-300 μ v. 600-750 μ) bene perspicuis, sed vix prominulis, difformibus, plus mi-

nusve laxe v. dense adspersa; granuli subhemisphaerici apice velutini subpenicillati, ex hyphis hyalinis fasciculatis continuis simplicibus, crassiuscule tunicatis sursum leniter incrassatis obtuse rotundatis efformati; basidia clavulata (20-22  $\approx$  6-7), sterigmatibus saepius 4 pusillis coronata; cystidia nulla; sporae parvae ellipticae laeves, hyalinae,  $6 \approx 4$ .

Hab. ad ramos emortuos putres Citri, prope Asuncion, Paraguay, Amer. austr.

#### Clavariaceae

9. Typhula tasmanica Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7648 1920 (1921), p. 157.— Angustissima filiformis e basi peltata strigosa oriens, infra alba v. pallide ochracea; stipite 2 cm. longo, parte fertili 1 cm. longa, tenuiter expansa; sporis albis, levibus, late oblongis magnitudine subvariabilibus, 6 \* 3-4.

Hab. in foliis emortuis Eucalypti, Tasmania.

### Telephoraceae

- 10. Telephora clavarioides Torrend, Broteria, Bot., v. XII, 1914, fasc. I, 7649 p. 61, fig. 2 (Fungi sel. exs. 244).— Primum sordide alba, stipitata, ex 4-12 ramulis clavatis 2-3 cm. altis, 4-15 mm. crassis xylarioidea, dein in ramulis tenuibus, filiformibus subdivisa. Speris non visis.
  - Hab. ad terram argillaceam, prope Bahia Brasiliae (J. TAVARES).
- 11. Hypochnus graminis Naoumow, Bull. f. Angew. Bot. 6., 1913, p. 7650 202, tab. 77 fig. 3, tab. 78 fig. 4,5.—Incrustans, albidus, flocculosomembranaceus, 180  $\mu$  cr.; hymenio levi; hyphis levibus laxe intricatis, 4-5  $\mu$  diam.; basidiis clavatis 9-12  $\mu$  latis, 4-rarius 2-sterigmaticis; sterigmatibus 6  $\mu$  altis; sporis globosis, hyalinis, tenuiter echinulatis, 8-9  $\mu$  diam.

Hab. in caulibus emortuis Calamagrostidis neglectae, Lesnoi distr. Petropolit., Rossia.

12. Cyphella globosa Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7651 1917 (1918), p. 108.— Sphaeroidea subconvoluta, erecta v. pendula 4-10 mm. diam., anguste (2-4 mm.) pedunculata, poro parvo constricto, alba, tenui, extus delicate tomentosa, pilis bulbillosis brevibus praedita; sporidiis hyalinis late oblongis 6 \* 4.

Hab. ad corticem mollem Oleariae argophyllae, in M. Wellington, Tasmania.

- CRYPTOBASIDIUM A. Lendner, Bull. Soc, bot, de Genève 1919, p. 127.—
  Incrustans, typice biogenus et vegetabilium partes quibus innascitur, deformans. Basidia tereti-longeclavulata, apice 4-spora (rarius 5-6). Sporae ovato-oblongae, clavatae, hyalinae, sessiles, connexae; cystidia clavata fasciculata.— Ob cystidia presentia gen. Hymeno-chacte, Kneiffia, Mycobonia et praecipue ob cystidia fasciculata gen. Scopuloides affine.— In Thelephoraceis-Corticieis.
- 13. Cryptobasidium Ocoteae A. Lendu., l. c., cum icon., et l. c. 12., 1920, 7652 p. 122.— Receptaculum carnosum solidum, irregulariter lobatum v. corniforme 10 cm. longus usque 1,5 cm. latum. Hymenium concavum, brunneum, 54 μ altum. Basidia 56 μ longa 5-6 μ lata. Sporae ovatooblongae v. clavatae, hyalinae, sessiles, connexae, 12 × 6. Cystidia clavata brunnea, polita, fulgentia, fasciculata, 160 × 10-15, longe pedicellata; pedicelli 2 μ cr.

Hab. ad apices ramorum viventium O c o t e a e sp. (Lauraceae), gemmas conspicue irregulariterque deformans, Tuccurique, Costa Rica (Tonduz).

- 14. Exobasidium dubium Raciborski, Mycotheca polonica fasc. I, ed. 7653 1909. Syn. Exob. Magnusii Woronichin, Syll. XXIII p. 554, secund. W. Siemazsko in litt. et in « Recherches mycologiques dans les montagnes du Caucase » p. 27 n. 143. Exob. dubium Rac., in Caucaso est fungus vulgaris, in Polonia rarus. Sec. Raciborski, (« Azalea pontica in Sandomiezez Wald und ihre Parasiten », in Bull. int. Ac. Sc. Cracovie 1909), Exob. dubium est probabiliter vix forma maculicola Ex. discoidei.
- 15. Rhiphidonema? Puiggari Spegazzini, Rel. myc. trop. in Bol. Ac. 7654 Nac. Cienc. Cordoba XXIII, 1919, Extr. p. 70. Effusum, repando-orbiculare,  $10 \cdot 100 \times 10 \cdot 25$  mm., hymenio submembranaceo, molle, albo-roseo, laevi, opaco, inferne trabeculis erectis fibroso-fasciculatis rigidulis subcartilagineis subsericeis ochroleucis laxissimis longiusculis, 3-6 mm. long. 50-150  $\mu$ , matrice innatis suffulto; sporae non visae.

Hab. ad ramos vivos arborum et fruticum in silvis prope Apiahy, America austr. (J. Puiggari).

### Tremellaceae

Septobasidium subolivaceum Syd., Philipp. Journ. of Sc., v. 9., Sect. 7655
 C, n. 2, 1914, p. 158.— Longe lateque effusum, papillas hemisphaericas vel depresse hemisphaericas majusculas 2-5 mm. longas 2-4

mm. latas et 1-2 mm. altas formans, subolivaceum, molliusculum, haud rimosum nec ad marginem fimbriatum, ex hyphis dilute olivaceis ramosis (ramis rectangulariter vel fere rectangulariter distantibus), 2,5-3,5  $\mu$  erassis parcissime septatis, articulis inde praelongis, compositum; hyphis basidiiferis superne pallidis, subhyalinis, 2-2,5  $\mu$  erassis; basidiis cylindrace clavatis, plerumque curvatis, 25-35  $\mu$  longis 6-8  $\mu$  latis, 2-4 septatis, pallide brunneolis usque subhyalinis; sporis non visis.

Hab. in caulibus vivis Schizostach y i sp., Palawan Taytay, Ins. Philipp. (MERRILL). — Cum insectis Coccideis consociatum.

## GASTEROMYCETAE

### Lycoperdaceae

17. Diplocystis lunodii P. Evans and A. M. Bottomley, South Africa 7656 Journ. of Sc., XIV, 1918, p. 460 (nomen nudum).

Hab. sud Africa or. Insitanico.

18. Secotium ochraceum Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7657 Year 1919 (1920), p. 112.— E base subglobosum 1-2 cm. diam. Pallide ochraceo-brunneo, superficie verrucosa, peridio tenuissimo, aegre distinguendo; stipite brevi, ad superficiem super. pilei sed non lateraliter, excedente; gleba ochracea, canaliculis distincte tortuosis, dissepimentis tenuibus; sporis ellipsoideis utrinque subacutis, pallide brunneis, levibus, 16 × 8.

Hab. ad terram, Cascades, Hobart, Tasmania.— Sec. Gunnii simile sed magnitudine sporarum diversum.

### Hymenogastraceae

19. Hysterangium atratum Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7658 Year 1919 (1920), p. 112. — Subglobosum 1,5-2 cm. diam. obscure brunneum viscidum; peridio carnoso tenaci, tenui; gleba obscure brunnea, canaliculis parvis sed copiosissimis; sporis obscure brunneis, subglobosis, 12 × 11, minute alveolatis.

Hab. ad terram, M. Nelson Range, Tasmania. — Hyd. neglecto simile sed sporis omnino diversum.

20. Hysterangium burburyanum Rodway, Pap. a. Proc. R. Soc. Tasma-7659 nia f. Year 1917 (1918), p. 109. — Globosum 1-2 cm. circ. diam.; peridio crassiusculo carnoso, arescendo calloso; gleba brunnescenti, viridi, gelatinosa; canaliculis numerosissimis, convolutis, parietibus tenuibus; sporis levibus oblongis, obtusis, 5 × 3.

Hab. ad terram prope Launceston, Tasmania (F. E. BURBURY).—
H. affine et fulvo proximum sed differt gleba sporiisque diversis.

21. Hysterangium inflatum Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7660 Year 1917 (1918) p. 109. — Globosum, rubro-brunneum 1 cm. circ. diam.; peridium carnosum, arescendo callosum, non crassum; gleba nigro-cyanea, distincte gelatinosa; canaliculis non confertis nec distincte convolutis; sporis anguste oblongis, 12 × 4, sed praecipue ad apicem vestitis.

Hab. ad terram, M. Wellington, Tasmania. — Gleba ut in H. affine sporis vero omnino alienum.

22. Hysterangium obtusum Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 1919 (1920) p. 112.— Irregulariter globosum, 2 cm. diam., udo violaceo; peridio crasso violaceo e gleba non facile separabile; gleba pallide olivaceo-ardesiaca; sporis oblongis, distincte obtusis, levibus, hyalinis, 9 × 4.

Hab. ad terram, M. Nelson Range, Tasmania.— Peridio et sporis a H. affine diversum.

23. Hysterangium pumilum Rodway, Pap. a. Proc. R. Soc. Tasmania 7662 f. Year 1917 (1920), p. 109. — Gregarium, caespitosum, globosum, pallidum, 2-3 mm. diam.; peridio tenui calloso, gleba gelatinosa, pallida translucenti; canaliculis latiusculis, non confertis, parum convolutis; sporis levibus, hyalinis, fusoideis, 12 × 4.

Hab. ad terram sabulosam, Wedge Bay, Tasmania.— Ab H. affine v. tenuisporo pluribus notis diversum.

24. Hymenogaster Barnardi Rodway, Pap. a. Proc. R. Soc. Tasmania 7663 f. Year 1920 (1918), p. 157. — Irregulariter globosum, album, 1-1,5 cm. cr.; peridio tenuissimo; gleba parum tenaci alba, loculis numerosis sed convolutis, basi sterili nulla; sporis oblongis, utrinque acutis, hyalinis, levibus, albis, 16-18 × 7.

Hab. ad terram, Mc Robie's Gully, Tasmania.

25. Hymenogaster fulvus Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7664 Year 1917 (1918), p. 109, et 1919 (1920) p. 112.— Irregulariter globosus usque 1-4 cm. diam., juventute pallide griseum senio niger; peridio tenuissimo, basi sterili e parva obsoleta; gleba flava, carnosa; canaliculis numerosis contortis; sporis oblongis utrinque obtusis, brunneis, levibus, 6-8 ≥ 3.

Hab. ad terram prope Strahan, Tasmania.— Ab H. albello et H. levisporo magnitudine v. forma sporarum diversus.

26. Hymenogaster Maideni Rodway, Pap. a. Proc. R. Soc. Tasmania 7665 f. Year 1920 (1921) p. 157.— Globosus, 2 cm. cr.; peridio tenuissimo,

albo, trito ochraceo; basi sterili obsoleta; gleba alba, canaliculis numerosis, parvis, contortis; sporis e ovatis oblongis, flavo-branneis, levibus  $10\cdot12\times6$ .

Hab. ad terram, Mc Robie's Gully, Tasmania.

27. Hydnangium densum Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7666 Year 1919 (1920) p. 112. -- Globosum pallide ochraceum, 1 cm. diam.; peridio crasso et tenaci; gleba e cavitatibus sporarum parvis nigris 0,3 mm. diam. marmorata; sporis copiosis globosis, brunneis, minute echinulatis, 9 μ diam.

Hab. ad terram, M. Nelson Range, Tasmania. - Species omnino peculiaris.

28. Hydnangium glabrum Rodway, Pap. a. Proc. R. Soc. Tasmania f. Year 7667 1920 (1921), p. 157.— Irregulariter globosum rubro-brunneum 1 cm. latum, basi sterili nulla; peridio tenuissimo non distincto, gleba e pallide rubro-brunnea ochracea, canaliculis numerosis et tortuosis praedita; sporis sphaeroideis glabris v. minute asperulis, albis, 7-10 μ cr.

Hab. ad terram in M. Maquiling, Tasmania. — Hymenogast. levisporo proximum.

29. Hydnangium microsporium Rodway, Pap. a. Proc. R. Soc. Tasmania 7668 f. Year 1919 (1920), p. 111.— Globosum, 6 mm. diam., e album pallide ochraceum; peridio crassiusculo tenaci; gleba densa aurantiaca, cavitatibus parvis, sporis farctis; sporis hyalinis, globosis, breviter spinulosis v. verrucosis, 5-6 μ diam.

Hab. ad terram, M. Nelson Range, Tasmania. — Hydn. brisbanensi proximum.

30. Gymnomyces flavus Rodway, Pap. a Proc. R. Soc. Tasmania f. Year 7669 1917 (1918), p. 110. — Subglobosus, sed forma magnitudine valde irregularis, plerumque circ. 5-10 mm. diam., juventute flavo-canarius, arescendo ochraceus. Peridium nullum superficie floccosa et canaliculis hymenialibus sterilibus prominentibus signata; canaliculis numerosis latis, contortis, trama carnosa, flava, parietibus tenuibus; sporis sphaeroideis, hyalinis, breviter crasseque spinulosis, 10-11 μ diam.

Hab. ad terram, Wedge Bay, Tasmania.

31. Gymnomyces solidus Rodway, Pap. a. Proc. R. Soc. Tasmania f. 7670 Year 1920 (1921) p. 157.— Irregulariter globosum album 1 cm. crassum; peridio nullo, trama externa loculorum externe protrudenti; gleba densa alba, canaliculis 3 mm. diam., compacta, sporis fareta; sporis globosis albis, crasse echinulatis, 12 µ diam.

Hab. ad terram, in M. Maquiling, Tasmania.

### USTILAGINACEAE ET UREDINACEAE

31 bis. Urocystis Sternbergiae Moes, Botanik. Közlemén. XIX, 1920, p. 7671 61 (10), cum icon. — Soris in ovariis hypertrophice deformatis evolutis; massis sporarum pulverulentis, atro-brunneis; sporis compositis globosis v. subglobosis, 20-30 μ diam., cellulis sterilibus extus perfecte circumdatis; sporis 1-v. raro 2 subsphaeroideis, brunneis 13-17 μ diam.; cellulis periphericis hemisphaerico-convexis, pallidioribus, 6-8 μ diam.

Hab. in ovariis Sternbergiae colchiciflorae (Amaryllidaceae), prope Budapest, Hungaria (F. FILARSZKY, G. MOESZ, Z. ZSÁK).

- 32. Puccinia Caricis s.l.— Sec. Cl. Eriksson (Arkiv. f. Bot. 16., 1920, 7672 n. 11 pp. 1-64; Rev. Gen. de Bot. 32., 1920, p. 15) ex studiis exper. in Scandinavia, species haec collecticia comprehendit:
  - 1. Puccinia Caricis diffusa n.n., I in Urtica dioica et Ribes grossularia, II-III in 8 spec. Caricum.
  - 2. Puccinia Caricis-urticae n. n., I Urtica dioica, II-III in 18 spec. Caricum.
  - 3. Puccinia Caricis-Ribis n. n., I Ribes.
    - Subsp. α) Puccinia Caricis-ribis diffusa, n. n., 1 Rib. grossularia et nigra, II-III Carex Pseudocyperus.
    - Subsp. β) Puccinia Caricis-grossulariae n. n., I Rib. grossularia, II-III in 5 sp. Caricum.
    - Subsp. γ) Puccinia Caricis-ribis-nigri n. n., I Rib. nigrum, II-III: f. sp. acutae (Car. acuta et stricta), f. sp. paniculatae (C. paniculata et paradoxa), f. sp. ripariae (C. riparia et acutiformis).
- 33. Puccinia poromera Holway, North Amer-Uredin. v. I, P. IV, 1913, 7673 p. 90, fig. 136.— Teleutosoris amphigenis in maculis irregularibus rotundatis aridis insidentibus, minutis (quandoque minutissimis), sparsis v. gregariis, in venis, petiolis caulibusque elongatis v. confluentibus, obscure brunneis, epidermide rupta prominentibus; teleutosporis magnitudine variabilibus, levibus, cinnamomeo brunneis, ellipsoideis v. oblongis plerumque utrinque rotundatis quandoque parum angulosis, tunica aequaliter, 1,5  $\mu$  cr., poris germ. ad septum approximatis prominenter papillatis, 25-42  $\approx$  15-26; pedicello hyalino, fragili, brevi.

Hab. in Angelica dilatata (Umbelliferae), Utah, Amer. bor. (A. O. GARRETT, Fungi Utah. n. 190).

34. Puccinia Cynomarathri Holway, l. c. p. 94, fig. 142, a, b. Spermo 767. goniis flavis, prominentibus, 100-160 µ diam. in foliis uredosporis primariis consociatis, saepe greges usque 4-5 mm. diam. efformantibus et uredosporis immixtis, filamentis ostiolaribus 30-40 μ long. praeditis; uredosoris primariis cinnamomeo-brunneis, amphigenis usque 10 mm. diam., primum epidermide cinnamomeo-brunneis, amphigenis usque 10 mm. diam., primum epidermide prominenti-textis; uredosoris secundariis pulverulentis, parvis, ellipsoideis, 1-2 mm. long.; uredosporis flavido-brunneis, globosis, ellipsoideis v. obovatis, tunica aequalite 2,5 µ cr. raro apice parum crassiori, aequaliter sed laxe echinulata, 27-30 \* 20-30; poris germ. equatorialibus 2-3, plerumque 3, papilla hyalina prominenti praeditis; teleutosoris nigris amphigenis e ellipsoideis oblongis, epidermide prominenti diu tectis, demum pulverulentis; teleutosporis e late ellipsoideis oblongis, cinnamomeo-brunneis, utrinque rotundatis v. e septo plus minus angustatis, saepe subirregularibus et angulosis, medio constrictulis, tunica aequaliter 2 \mu er., crasse aequaliter verrucosa, raro apice parum crassiori 37-42 × 22-30, poris germ. uno apicali altero septo approximato; pedicello hyalino, fragili sporam longitudine subaequante.

Hab. in Cynomarathro Nuttallii (Umbelliferae), Wasatch Mts., Utah, Amer. bor. (GARRETT, Fungi Utah. 2. n. 51).—
Pucc. Ellisii proxima sed uredosporis omnino diversis.

35. Puccinia Pseudocymopteri Holway, l. c. p. 91, fig. 138, a, b. - Sper- 7675 mogoniis non visis; aecidiis minutis sparsis v. in parvos greges confertis, saepe in caulibus et petiolos effusis, primum poro apertis dein parce cupulatis, peridio irregulariter lacerato sed non reflexo praeditis, cellulis peridialibus fortiter verrucosis, oblongis,  $37-47 \times 25-32$ , tunica aequaliter 5-6  $\mu$  cr.; aecidiosporis aurantiacis, crebre crasseque verrucosis globosis v. oblongis, 20-30 × 20-25; uredosoris amphigenis cinnamomeo-brunneis, minutis primum epidermide tectis demum pulverulentis in caulibus confluentibus; uredosporis pallide brunneis e ovoideis globosis, echinulatis, 27-32 × 22-25 poris germ. minutis, aegre visibilibus, apparenter 4; teleutosoris amphigenis obscure brunneis, parvis, globosis v. oblongis, sparsis, saepe aecidiis immixtis demum in foliis uredosoros sequentibus, diu epidermide tectis ultimo pulverulentis; teleutosporis flavescenti-brunneis, late ellipsoideis, subfragilibus, tunica aequaliter 1-1,5 µ cr., subreticulata v. plus minus longitudinaliter irregulariterque rugulosa, poris germ. uno apicali altero plus minus pedicello approximato, non papillatis,  $30\text{-}36 \approx 22\text{-}26$ ; pedicello fragili, hyalino sporam non excedenti.

Hab. in Pseudocymoptero montano, Ouray, Cor. (BETHEL), Eldora, Col. (WYOMING), Ps. anisato (Umbelliferae), Utah, America bor.

### PHYCOMYCETAE

**PERICYSTIS** Betts (corr., Syll. XXIV), p. 10: Annals of Botany, vol. 26, 1912 (nec 1914) p. 795-799.

36. Pericystis Apis Maassen in Mitteilungen aus der Kaiserl. Biolog. 7676 Anstalt für Land-u. Forstwirtschaft, Heft 16, 1916, p. 51-58.

Hab. in larva Apis mellificae, Germania.—Sec. P. Claussen (Arbeiten a. d. Biol. Reich anstalt f. Land-u. Forstw. Bd. X, Heft 6, 1921, p. 467-521, 24 fig. tab. III-V), Per. alvei Bett. et Per. Apis non tantum specifice, sed potius generice, diversae.

- OLPIDIASTER A. Pascher.— Beih. d. Bot. Centralbl. 35., II Abt., 1917, p. 579.— Syn. Asterocystis de Wild., Syll. XIV p. 437 nec Asterocystis Gobi, ex Algis, quia anterius. Sistit etiam in fungis Asterocystis Berk. et Br., Syll. I p. 293.
- Olpidiaster radicis (de Wild.) Pascher, l. c., Asterocystis r. de Wild. 7677
   l. c.— Cnfr. Sylloge XIV p. 437.
- 38. Saprolegnia curvata v. Minden in Falck, Mykol. Untersuch. u. Ber., 7678 2. H., 1916, n. 6, p. 218, fig. 23, tab. V fig. 38.44. Caespitulis superficialibus, ex hyphis usque 1 mm. long. et 50  $\mu$  cr., simplicibus albidis, hyphis intramatricalibus singulis v. aggregatis; sporangis in hyphis extramatricalibus ad apicem efformatis plerumque cylindraceis v. subfusoideis,  $400 \times 50$ , eximie incurvatis; antheridiis et oogoniis intramatricalibus, oogoniis acro-pleurogenis v. intercalaribus ferma magnitudine variabilibus (usque 90  $\mu$  cr.), antheridiis terminalibus (an semper?), cylindraceis v. clavatis quandoque ramosis; oosporis in quoque oogonio 1-12 plerumque 3-5 efformatis, plerumque globosis raro ellipsoideis (20-37  $\mu$  cr.).

Hab. ad superficiem mucosam Valvatae sp. in flumine ad Insulam Waltershof, Hamburg.

39. Achlya . . . . Coker a. Couch, A new spec. of Achlya, in Journ. 7679 Elis. Mitch. Sc. Soc., 36., 1920, pp. 100-101 (nom. nobis tantum nota). 40. Pythium Butleri Subramaniam, Mem. Dep. Agr. India 10., 1919, 76. pp. 181-194, 6 tab.

Hab in radicibus, rhizomatibus etc. praecipue Nicotianae Tabacci, nec non Capsici, Zingiberis, Papayae, prope Pusa, Indiae or., quos valde necat.— Secundum Carpentier, in Bull. Exp. St. Hawai, Sug. Planters Ass., III, P. I, 1921, p. 59 iidem est ac Rheosporangium aphanidermatus Eds., Syll. XXIV, p. 31.

41. Pythium pulchrum v. Minden in Falck, Mykol. Untersuch. u. Ber., 7681
2. H., 1916, n. 6, p. 227, fig. 25-26, tab. VI fig. 49-55. — Mycelium filosum ex hyphis tenuibus 2-3 μ er. efformatum. Sporangiis terminalibus v. intercalaribus quandoque seriatis subarticulatis globosis v. ellipsoideis; oogoniis terminalibus v. intercalaribus subglobosis 28 μ diam., antheridiis approximatis magis longis quam crassis; oosporis globosis tunica levi et contentu granuloso praeditis, 21-27,5 × 24.

Hab. inter Saprolegnias et ova Formicarum, Hamburg, Germania.

- PYTHIOGETON v. Minden in Falck, Mykol. Untersuch. u. Ber., 2. H., 1916, n. 6, p. 241. Mycelium saprophyticum ex hyphis tenuibus plus minus ramosis efformatum. Sporangia terminalia v. intercalaria subgregaria anguste longeque ovoidea; zoosporae subreniformes 2-ciliatae. Oogonia globosa v. subpolygonia, oosporam semper singulum efformantia, antheridia hemisphaerica plus minus appendiculata oogoniis approximata.
- 42. Pythiogeton utriforme v. Mind., l. c., p. 242, tab. VI fig. 56-65.— 7682 Sporangiis terminalibus forma magnitudine variabilibus ex hyphis 2,5-3,5  $\mu$  cr.; oogoniis subglobosis 45  $\mu$  cr.; antheridiis ad oogonii basim singulis connexis.

Hab. ad fructus putres etc., Hamburg, Breslau, Germania, et America bor. (BUTLER).

43. Pythiogeton transversum v. Mind., l. c. p. 242, tab. VII fig. 66-72.— 7663 Sporangiis initio intercalaribus, demum ob hyphas supra evanidas simulate apicalibus, magnis irregularibus transverse insertis; oogoniis primum globosis demum membrana areis polygonalibus divisa, 50 μ circ. cr.; antheridiis minoribus appendice secedenti praeditis; oosporis 40 μ cr. et membrana crassa hyalina praeditis.

Hab. ad frustula vegetalia putrescentia, Hamburg, Germania.

44. Pythiogeton ramosum v. Minden, l. c. p. 243, tab. VIII fig. 74-75. - 7684

Hyphis fertilibus crebre denseque ramosis; sporangiis ad apicem hypharum transverse dispositis, elongato-ovoideis uno latere saepe abrupte angustatis incurvatisve. Oogoniis antheridiisque ignotis.

Hab. ad tubera putrescentia Betae, Hamburg, Germania.

45. Phytophthora cryptogea Pethybridge and Lafferty, Proceed. R. Du. 7685 blin Soc., 15., 1919, p. 487-505, 3 tav. — Nomine nobis tantum notatub. in radicibus putrescentibus nec non ad basim caulorum plantarum variarum (Petunia, Aster, Cheiranthus, Gilia tricolor, Fagus) imprimis Solani tuberos i ubi morbum «Tomato Foot-Root» dictum generat,? Anglia. — Oosporae in terra hibernantes.

46. Peronoplasmopara portoricensis Lamkey in Stevens, Mycologia 12., 7686 1920, p. 52.— Maculis lunuginosis, irregularibus hypophyllis; conidiophoris e stomatibus emergentibus, singulis v. 2-3, 80-300 × 5,5-11, pseudomonopodialiter 3-5 ramosis, ramulis terminalibus conoideis 9-18 μ long.; conidiis ellipsoideis, hyalinis, 14-24 × 16,5-28.— Oosporis non visis.

Hab. in foliis Meliae Azedarach, Guanica, Porto Rico.

## **PYRENOMYCETAE**

- 47. Sphaerotheca pannosa (Wallr.) Lév. Syll. I p. 3 var. Rosae 7687 Woronichin, Bull. f. angew. Bot. 7., 1914, p. 450. Peritheciis 109  $\mu$  diam., ascis 108  $\times$  75, sporidiis 25  $\times$  16,5, in Rosa (Rosaceae) var. Persicae Woron., l.c., peritheciis 85  $\mu$  diam., ascis 85,8  $\times$  62, sporidiis 23  $\times$  14, in Amygdalo Persica et Amyg. communi.
- CLEISTOTHECOPSIS Fr. L. Stevens et East. J. True, Univ. Illinois Agric. Exp. Stat. Bull. n. 220, 1919, p. 530. Characteres ut in Cleistotheca sed stat. conidicus Volutella.
- 48. Cleistothecousis circinans Stev. et True, l. c., cum 19 tab.— Peri- 7688 theciis superficialibus, irregulariter globosis e obscure brunneis nigris, non ostiolatis, superficie reticulata praeditis, saepe breviter setulosis, parietibus pseudoparenchymaticis; ascis clavatis, basilaribus, evanidis, octosporis, circ. 70-96 × 19,2-24; paraphysibus evanidis.— Status conid. Volutella circinans (Berk.) Stev. et True l. c., Vermicularia Berk. 1851, Sacc., Syll. III p. 233.

49. Phyllachora Callistemoni Rodway, Pap. a. Proc. R. Soc. Tasmania f. 768
Year 1917 (1918) p. 108.—Stroma nigrum, nitidum plerumque orbiculare et 1 mm. circ. diam.; saepe gregatim in maculis decoloratis amphigenis insidente; peritheciis numerosis omnino immersis; ascis cylindraceis octosporis; sporidiis oblongis, obtusis, levibus, hyalinis, 18-20 × 7.—Status pycnidicus verisimiliter sistit Hyaloccras dilophospora Cooke in foliis Leptospermi scoparii.

Hab. in foliis Callistemoni (?), Chimney-pot Hill, Hobart, Gordon, Tasmania.

50. Euryachora Sacchari Averna Sacca, Bol. Agric. São Paulo, 17., 1916, 7690 p. 618, « Molestias cryptogamicas da Canna da assucar », Sao Paulo 1916, p. 11, fig. 231-232. — Stromatibus maculicolis primum subepidermicis dein erumpentibus, magnis globosis pulvinatis periphaerice loculigeris; ascis clavatis rotundatis, infra breviter angusteque pedicellatis, octosporis; sporidiis fusoideis demum fuligineis grosse uniguttulatis, 29-40 × 16,2.

Hab. in culmis Sacchari officinarum, prope Piracicaba, Brasilia.

51. Physalospora piperina Sydow, Ann. Mycol. XIII, 1915, p. 38.— Pe. 7691 ritheciis irregulariter sparsis, globulosis, minutissimis, 70-120 μ diam., primo omnino immersis dein vertice plus minus emergentibus, atris, contextu obscure fusco parenchymatico ex cellulis 4-6 μ diam. compositó, ostiolo minuto pertusis; ascis cylindraceo-clavatis, 35-42 × 7-8, paraphysatis, octosporis; sporidiis distichis, fusoideis, minute guttulatis, continuis, utrinque attenuatis, hyalinis, 8-10 × 2.

Hab. in caulibus siccis Piperis nigri, Vayitri, Wynaad, Malabar (E. J. BUTLER).

52. Sphaerella Unguadiae Siemaszko, Bull. Musée du Caucase, XII, 7692 Tiflis 1919, Extr. p. 1. — Maculis amphigenis, brunneis, peritheciis 100 μ diam., erumpenti-superficialibus, dilute brunneis, contextu celluloso, cellulis 6-8 diam., poro 25 μ lato pertusis; aseis 8-sporis 50-60 × 10, curvulis, apice rotundatis, sporidiis 1-septatis, hyalinis, 15 × 6-7.

Hab. in foliis languescentibus Unguadiae speciosae Endl., Suchum (Abchazia), Hortus Botanicus, Caucasus.

53. Didymella aurantiiphila Speg., An. Soc. Cient. Argent. 90., 1920, 7693 Extr. p. 21.— Ramulicola; perithecia sublenticularia, minuta, 180-200 μ diam., epidermide tecta, non v. vix papillato-ostiolata, membranaceo-carnosula, contextu pallide fusco indistincto; asci subcylindracei,  $80\text{-}100 \times 14\text{-}15$ , sursum lenissime angustati apiceque abrupte subtruncato-rotundati crasseque tunicati deorsum sensim attenuati atque in pedicello brevi crassoque producti, octospori, paraphysibus filiformibus simplicibus longioribus commixti; sporae distichae, ellipticae, utrinque subacutiuscule rotundatae, primo 2-4-blastes, tunica mucosa tenui obvolutae, dein medio 1-septatae, leniter constrictulae, nudae, hyalinae,  $18\text{-}22 \times 5\text{-}7$ . An serius 3-septatae?

Hab. ad ramos emortuos (ob gumosis?) Citri aurantii, prope Asuncion Paraguay, Amer. austr.

54. Melanomma aurantiicola Speg., An. Soc. Cient. Arg., 90., 1920, Extr. 7694 p. 22.— Matrix late sordideque infuscata; perithecia sparsa v. hinc inde (2-3) paucigregaria, primo matrici infossa, serius plus minusve exerta majuscula globulosa (600-800 μ cr.), ostiolo papillato brevi crasso coronata carbonacea glabra; asci cylindracei, apice rotundati, postice abrupte breviusculeque cuneato-pedicellati (175-200 × 25-30), octospori, paraphysibus densis filiformibus simplicibus longioribus obvallati; sporae oblique monostichae, cylindraceo-ellipsoideae, non v. leniter inaequilaterales, utrinque rotundatae, 3-septatae, ad septum medium tantum leniter constrictae, crassiuscule tunicatae, laeves pulchre fuligineae, 30-40 × 16-18.

Hab. ad ramos dejectos exsiccatos C i t r i a u r a n t i i, prope Asuncion, Paraguay, America austr.

55. Melanomma aurantiiphila Speg., An. Soc. Cient. Arg., 90., 1920. Extr. 7695 p. 23. — Perithecia sparsa v. laxe (3-5) gregaria, matrice leniter infuscata insidentia, saepius dimidia, infera ligno insculpta, dimidia supera hemisphaerico-conoidea (350-650 μ cr.) exerta ac in ostiolo erecto crassiusculo producta, carbonacea; asci cylindracei, apice obtuse rotundati crassiusculeque funicati, postice cuneati ac in pedicello attenuati octospori, paraphysibus filiformibus simplicibus longioribus cincti (p. sp. 120-150 × 12-18, ped. 30-35 × 5-8); sporae saepius oblique monostichae, e cylindraceo subellipsoideae inaequilaterales v. leniter curvulae, utrinque subrotundatae ac saepius minute subumbonatae, 3-septatae, ad septa non v. vix constrictae, primo pallidae pellucidae, loculis 1-guttulatis, dein intense fuligineae opacae, 20-30 × 10-12.

Hab. ad lignum truncorum vetustorum Citri, prope Asuncion, Paraguay, America austr.

56. Ustulina brachyspora Speg., An. Soc. Cient. Argent., 90., 1920, 7696 Extr. p. 20. – Stromata plane superficialia, majuscula (20 mm. diam.,

6-8 mm. cr.), intus extusque suberoso-subcarbonacea, primo sordide fusco-subrubiginosa, dein atra, superne convexa margine abrupte rotundata, inferne applanata sessilia, centro matrici plus minusve late adnata; superficies externa stromatis, sub vitro valido, dense minuteque (200-300  $\mu$ ) papillato-asperula ob ostiolorum protuberantiam et saepe marginem versus obsolete radiatimque plicato-undulata; perithecia periphaerica cylindraceo-ellipsoidea minuta erecta dense constipata; asci non visi; paraphyses numerosae crassiusculae articulatae (10-20  $\times$  3-4), articulis grosse guttulatis; sporae ellipsoideae non v. vix inaequilaterales utrinque acutiuscule rotundatae, non v. grosse 1-guttulatae, laeves, fuligineae,  $14 \times 7$ .

Hab. ad superficiem recisam trunci Citri, prope Asuncion, Paraguay, Amer. austr.

57. Cryptosporella aurantiicola Speg., An. Soc. Cient. Argent., 90., 1920, 7697 Extr. p. 19.—Stromata cortice innata immersaque subhemisphaerica subcarbonacea atra; perithecia valsiformiter in stromatibus circinantia paucigregaria monosticha, globosa v. e mutua pressione difformia, coriaceo-submembranacea, ostiolis papillatis subconniventibus, carbonaceis, non v. vix e stromatis apice protrudentibus ornata; asci subcylindracei antice rotundati subcrassiusculeque attenuato-pedicellati, octospori, aparaphysati v. paraphysibus paucis filiformibus commixti; sporae elongato-ellipticae utrinque attenuatae inaequilaterales, subnaviculares, primo saepius 6 blastae, serius continuae, grosse 2-guttulatae, hyalinae.— An species immatura et melius ad genus Calospora transferenda?

Hab. ad ramos emortuos subputres Citri aurantii, in hortis prope Asuncion Paraguay, America austr.

58. Eutypella pusilla Speg., An. Soc. Cient. Argent., 90., 1920, Extr. 7698 p. 17. — Stromata ligno insidentia, cortice primo tecta dein erumpentia, e discoideo subhemisphaerico-conoidea fere valsoidea, atra; perithecia in quoque stromate pauca (1-6) globulosa (120-180 μ diam.), carnosulo-submembranacea, ostiolo subconoideo crassiusculo non v. vix exerto carbonaceo obtuso integro coronata; asci dense congesti non decidui aparaphysati, clavati, breviter pedicellati, pusilli, octospori (pars sporifera 15 × 3-4, pedicello 4-6 × 1); sporae allantoideae pusillae, leniter chlorinae, 3,5-4 × 1.

Hab. in ramis siccis Citri aurantii, prope Asuncion Paraguay, America austr.

59. Eutypa paraguaya Speg., An. Soc. Cient. Argent., 90., 1920, Extr. 7699
 p. 18. — Lejostoma; stromate corticali ramos late (2-4 mm.) am-

biente intus extusque nigerrimo, primo tecto-erumpente, serius cortice secedente denudato, scruposo-rugoso, irregulari, superficiem ligni plus minusve atro-inquinante; perithecia, globosa, 250-400  $\mu$  diam., stromate immersa monosticha, constipata v. relaxata, ostiolis conoideo-subhemisphaericis plus minusve exertis obtusis laevibus; asci cylindraceo sabclavati breviuscule pedicellati, aparaphysati, octospori,  $40\cdot45 \times 6\cdot7$ ; sporae mediocres subdistichae cylindraceae v. lenissime subnaviculares, inaequilaterales v. subcurvulae, utrinque rotundatae atque minute 1 guttulatae, chlorinae,  $10\cdot12 \times 2\cdot2\cdot5$ .

Hab. ad truncum putrem Citri, prope Asuncion Paraguay, America austr.

60. Lophidiopsis paraguayensis Speg., An. Soc. Cient. Arg., 90., 1920, 7700 Extr. p. 24. — Perithecia sparsa v. laxe gregaria, ligno indurato extus obscure infuscato omnino infossa, ostiolo hysterioideo acuto carbonaceo tantum exerto, globosa majuscula (400-800 μ diam.) subcarnosa, pallida, contextu indistincto; asci cylindracei, apice subtruncato-rotundati, postice abruptiuscule cuneato-pedicellati, octospori (200 × 30), paraphysibus densis filiformibus longioribus obvallati; sporae saepius oblique monostichae, ellipsoideae, mediocres, primo subparenchymatico-cellulosae et tunica mucosa crassa vestitae, serius denudatae, transverse 5-7-, longitudinaliter 1-2-septatae, ad septum medium tantum constrictae, loculis 1-guttulatis, hyalinae, 32-45 × 14-18.

Hab. ad cicatrices ranorum adhuc viventium Citri Aurantii, S. Antonio prope Asuncion Paraguay, America austr.

- 61. Metasphaeria Feltgenii Moesz nom. nov., Botan. Közlemén. 14., 1915, 7701 5-6, p. 151 (111). Syn. Met. Scirpi Feltgen 1901, Syll. XVII p. 704 nec Berlese 1890 (= Leptosphaeria vagans f. Scirpi, Sacc. Syll. II p. 59, XXII p. 199).
- 62. Metasphaeria Javorkae Moesz, Botan. Közlemén. 14., 1915, 5-6, 7702 p. 149 (110), cum icon.— Peritheciis laxe gregariis, epidermide tectis, dein vix erumpentibus, globulosis vel conoideis, non papillatis, nigris, contextu indistincte parenchymatico, 257-360 μ diam., poro 28-43 μ lato, pertusis; ascis cylindraceo-clavatis, apice rotundatis, octosporis, 93-133 × 10-13, jodo immutatis, paraphysibus filiformibus, 1,5-2 μ crassis, subramosis obvallatis; sporidiis, di-tristichis, anguste fusiformibus, 36,5-47 × 4-6, rectis vel leniter curvulis, utrinque acutatis, hyalinis, 1-septatis, dein protoplasmate tripartito spurie septatis et 4-6 grosse guttulatis, non constrictis, primo stratu tenui mucoso vestitis.

Hab. in foliis culmibusque siccis Festucae xanthinae (Graminaceae), prope « Herkulesfürdő » Hungariae meridionalis (F. FILARSZKY et S. JÁVORKA).

63. Pyrenophora hungarica Moesz, Botan. Közlemén. 14., 1915, 5-6, 7703 p. 148 (199), cum icon.— Peritheciis plus-minus gregariis, primum epidermide tectis, dein erumpentibus, subliberis, subglobosis, atris, 171-257 μ diam., 214-286 μ longis, ostiolo papillato, coriaceo-membranaceis, setis rigidis, fuligineo-atris, unicellularibus, 140-215 μ longis, laxe undique vestitis; contextu perithecii minute parenchymatico; aseis cylindraceis, basi breviter pedicellatis, octosporis, 106-120 × 23-27; paraphysibus filiformibus, demum mucoso-diffluentibus; sporis distichis, oblongis, transverse 7-9 (plerumque 8) septatis, ad septa constrictis, in longitudine 1-septatis, primo flavis, demum fusco-atris et opacis, strato mucoso obvolutis, 33-50 × 12-17.

Hab. in foliis aridis Paronychiae cephalotes (Caryophyllaceae), in valle « Tordai hasadék » prope Torda, et in monte « Fortyogó » prope oppidum Brassó, Hungariae.

64. Pyrenophora ciliolata Moesz, Botan. Közlemén. 14., 1915, 5-6, p. 7704 146 (109), cum icon. — Peritheciis gregariis, primum epidermide tectis, dein erumpentibus, subglobosis, atris, 133-200 μ diam. 150-233 μ longis, coriaceo-membranaceis, ostiolo papillato, fimbriato, basi fibrillosis, vertice pilis rigidis et flexuosis, pluricellularibus, usque ad 150 μ longis, fuscidulis, apicem versus dilutioribus praeditis; contextu grosse parenchymatico, fuligineo; ascis cylindraceis, basi breviter pedicellatis, octosporis, 100-150 × 30, paraphysibus filiformibus obvallatis; sporis distichis, oblongis, supra medio latioribus, utrinque rotundatis, 30-40 × 13-18, transverse 7-septatis, ad septa constrictis, loculis mediis longitudinaliter 3-septatis, brunneis, subopacis, primum strato mucoso obvolutis.

Hab. in scapis siccis Primulae auriculae (Primulaceae), in montibus « Bélai havasok » Montium Magas-Tàtra Hungariae (F. FILARSZKY et G. MOESZ).

AMYLIROSA Speg., An. Soc. Cient. Arg., 90., 1920, Extr. p. 26 (Etym. a nomine Auct. filiae recenter obitae, seu AMYL ROSA).—Dothideacea; stromata innato-superficialia, hemisphaerica v. globoso-depressa, coriaceo-subcarbonacea, glabra, intus extusque atra; loculi subpolystichi, stromate omnino immersi non prominuli astomi globosi, tunica aegerrime a stromate distinguenda vestiti; asci cylindracei octospori paraphysati; sporae muriformes ellipsoideae, septis pluri-

bus transversis uno alterove longitudinali divisae fuligineae. Genus habitu Melogramma accedens, ad Curreyam vergens, ab utroque, ut videtur, satis riteque distinctum; statum ascophorum Pseudhaplosporellae Speg., Paradiplodiae Speg., nec non Ephelidii Speg., sistens et cum iis metagenetice conjunctum.

65. Amylirosa aurantiorum Speg., l. c. fig. 12-14. - Stromata innato-su- 7705 perficialia dense v. laxe gregaria saepe circinantia, hemisphaericodepressa, parva vix colliculosa, atra opaca (1-2 mm. diam. 0,5-1 mm. cr.); loculi saepius distichi globulosi minuti (180-250 µ diam.) astomi (an semper?); asci cylindracei, apice rotundati, deorsum modice attenuato-pedicellati, octospori, paraphysibus filiformibus simplicibus longioribus obvallati (p. sp. 80-100 \* 10-14, ped. 15-30 \* 4-6); sporae oblique monostichae, ellipsoideae, tranverse 1-2-3-4-5 septatae, saepe loculo uno alterove centrali longitudinaliter diviso, fuligineae, pellucidae,  $15-17-20 \times 6-7-8$ .

Hab. ad ramos emortuos Citri aurantii, morbum «lepram explosivam » dictum affecti, prope Asuncion Paraguay, America austr.

CHROMOCREOPSIS Stevenson in Johnston and Stevenson, Sugar cane Fungi etc. in Journ. Dep. Agric. Porto Rico, v. I, 1917, n. 4, p. 213. Cum gen. Creopus Lk. 1833, Chromocrea Seaver 1910, Phaeocrea P. Henn. 1902, Phaeocreopsis Sacc. et Syd. 1899, in Hypocreaceis, comparandum.

66. Chromocreopsis striispora Stevenson, l. c. — Stromatibus sparsis, 7706 tuberculiformibus e subglobuloso depressis, basi constrictis, saepe substipitatis, 1-3 mm. diam., altitudine minoribus, primum rubrolatericiis, in sicco obscurioribus, pallidioribus, peritheciis nigris prominenti ostiolatis praeditis; ascis cylindraceis; sporis monostichis obscure brunneis, ovoideo-ellipsoideis, utrinque rotundatis, 1-guttulatis 20-22 × 5.7, striatis, striis in sporis immaturis magis perspicuis.

Hab. ad culmos emortuos Sacchari officinarum (Graminaceae), Gurabo, Porto Rico, America Centr. - Forma et striatione sporarum distincta.

### DISCOMYCETAE

67. Taphrina Struthiopteridis Siemaszko, Bull. Musée du Caucase, XII, 7707 Tiflis 1919, p. 1 (Estratto).— Maculis amphigenis, rhomboidalibus, aureis vel fuscidulis; hymenio hypophyllo subcinereo; ascis caespitosis, clavatis, apice rotundatis, 6-8 sporis; sporidiis subglobosis, 4-5,5 × 3,3-3,5-4,5, hyalinis.

Hab. in frondibus haud deformatis Matteucciae Struthiopteridis Tod., Circassia, Krasnaja-Polana propem. Açeskho, Caucasus. — Obs. Inter Tuphrinam tonduzianam F. Henn. et T. rhomboidalem Syd. et Butl. intermedia videtur.

- PATELLONECTRIA Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 115. Stromata carnosula lacticoloria cupulato-disciformia, centro perithecio concolore praedita; asci 4-8-spori, paraphysati; sporae ellipsoideae, crebre septato-muriformes, hyaline. Genus eximium, nonnihil licheninumu, facilline Patellinarum statum ascophorum sistens.
- 68. Patellonectria Puiggarii Spegaz., l. c. cum icon.— Cupulae orbicu- 7708 lares, 0,4·0,5 mm. diam. superne concaviusculae, inferne convexulae atque breviter crassiusculeque stipitulatae, margine acute integrae, albae ceraceae glabrae, gonidiis plane destitutae; perithecia solitaria centro cupularum insidentia, ad medium usque et ultra immersa, uda globulosa ceraceo-carnosula, in sicco collabescentia, glabra laevia concoloria, ostiolo fusco-violascente vix umbonatulo coronata; asci elongato-ellipsoidei, superne obtuse rotundati, deorsum modice cuneati, pedicello brevi crassiusculoque suffulti, paraphysibus filiformibus confertis obvallati, 4-spori, 150 × 40; sporae distichae elongato-ellipticae utrinque acutiusculae, rectae v. leniter inaequilaterales, septis transversis saepius 11, longitudinalibus 1 v. 2 interruptis, ad septa non v. leniter constrictae, loculis 2 centralibus majoribus, caeteris apices versus sensim minoribus, laeves, hyalinae, 70 × 18.

Hab. ad corticem trunci arboris cujusdam emortui, prope Rebeirao de Campinas, America austr. tropica (J. Puiggari).

69. Beloniella tuzsoniana Moesz, Botan. Közlemén. 14., 1915, 5-6, p. 7709 146 (108), cum icon. — Ascomatibus laxe gregariis erumpentibus, primo globoso-clausis, dein urceolatis vel cupulatis, 90-230 µ diam., extus aurantiaco-incarnatis, levibus, disco incarnatis, margine al-

bidulo insigniter fimbriatis; fimbriis usque 66  $\mu$  longis; ascis subcylindraceis, 37-50  $\times$  4-6, apice obtuse attenuatis, jodo vix tinctis; sporidiis mono-distichis, fusoideis, 7-10  $\times$  2-3, hyalinis, demum bicellularibus, in septo non vel vix constrictis eguttulatis; paraphysibus mucosis; excipulo indistincte prosenchymatice contexto ca. 16  $\mu$  er., ceraceo.

Hab. in caulibus emortuis Atropae belladonnae (Solanaceae), in monte Madarashegy, comit. Bars, Hungariae.

# REPERTORIUM

# FUNGORUM IN VOL. XXIV DESCRIPTORUM

secundum matrices (vegetabilia et animalia)

Obs. — Di. Discomycetae — Ga. Gasteromycetae — Hy. Hymenomycetae — La. Labontbeniomycetae — Phy. Phycomycetae — Py. Pyrenomycetae — Ur. Uredineae — Ust. Ustilagineae.

Abies — Py. 4283, 4332, 4994, 5738, 6023, 6126, 6837 — Di. 7063, 7174, 7181, 7337, 7356, 7429.

Abutilon — Py. 4260.

Acacia — Py. 5126, 5230, 5231, 5343 — Di. 7500.

Acalypha — Phy. 3555. — Py. 4401, 4402, 4995, 5547.

Acanthaceae — Py. 4793. Acanthocarpus — Py. 4965.

Acanthocladium — Py. 6338.

Acanthopanax — Py. 6240.

Acanthophyllum — Py. 6771. Acer — Py. 5031, 5567, 5629, 5749, 5785, 6357, 6368, 6403, 6984. — Di. 7063, 7318,

7325, 7338, 7400, 7424, **7437**, 7547.

Acokanthera — Py. 4722.

Aconitum — Py. 6308, 6309, 6944.

Acorus — Py. 6096, 6803.

Actepila — Py. 4996.

Actinidia — Py. 4238, 6133.

Adenostoma — Di. 7475, 7499. Adenostyles — Di. 7240.

Adhatoda — Py. 4793.

Adiantum — Py. 4413, 5919, 6151.

Adina — Py. 4628.

Aegopodium — Py. 3561. — Di. 7620.

Aesculus — Py. 5442, 5788, 5789, 5823.

Afzelia - Py. 5232.

Aganosma — Py. 4743.

Agapanthus — Py. 6189.

Agave — Phy. 3428. — Py. 4279, 6094, 6530, 6768. — Di. 7339.

Aglaia — Py. 4482, 5013, 5025, 6644.

Aglaonema — Py. 5028.

Ailantus - Py. 5646, 5897.

Aizoon — Phy. 3425.

Alangium — Py. 4390, 4808, 5681, 6453.

Albizzia — Py. 5328, 5454, 5726, 5744, 5829

Alchemilla — Py. 6042.

Alchornea — Py. 4670, 5990.

Aleurites — Py. 7001.

Algae — Phy. 3359, 3380, 3401, 3408, 3410, 3421, — Py. 4677, 5061, 5071, 5300, 5543,

5544, 5581, 58,2, 6019, 6093, 6244, 6254, 6369, 6370, 6677, 6678, 6789, 6781, 6992. Alhagium — Py. 5875. Alibertia — Di. 7026. Alicularia — Py. 4687. Allamanda — Py. 5771. Alliaria - Phy. 3457. Allionia — Py. 6206. Allium — Phy. 3429, 7688. — Py. 6957. Alnus — Phy. 3332, 3415. — Py. 5628, 5751, 5757, 5840, 6021, 6022, 6084, 6105, 6106, 6107, 6108, 6434, 6769, 6810, 6814, 6820, 6823, 6844. Di. 7173, 7203, 7330, 7548, 7552. Alocasia — Py. 6097. Aloysia — Py. 6577. Alsodeia — Py. 4580, 4753. Alstonia - Py. 4757, 6523. Alyssum — Phy. 3458, 3459. Alyxia — Py. 4758, 5405. Amaranthus — Di. 7311. Amelanchier — Di. 7458. Ammophila — Di. 7393. Amomum - Py. 4583. Amoora — Py. 4483. Amphilophium — Py. 4738 Amygdalus — Py. 6468, 6562, 7687. Amyris - Py. 4536. Anacardium — Py. 4637, 4669. Anamirta — Py. 4905. Anastiabes — Py. 4558. Anastraphia - Py. 6947. Anaxorea — Py. 4895. Anchonium — Py. 6761. Andira — Py. 4442, 5549, 5927. Andropogon — Phy. 3567. — Py. 5176, 5177, 5178, 5326, 5604. 6990. Androsace — Phy. 3523. Andryala — Py. 6118. Aneimia — Py. 4413, 6152.

Anemone — Phy. 3389.

Angelesia — Py. 4862. Angelica — Ur. 7673. — La. 3559, 6241. Angiopteris — Phy. 3437. Animalia - Di. 7544, 7611, 7612 — Phy. 3319, 7678. — Py. 3320, 3321, 3339. Anisoptera — Py. 4815, 4951. Anona — Py. 5146, 5650, 6790. Anonaceae — Pv. 4989, 6608 Antennaria — Py. 6792. — Di. 7179, 7209. Anthephora — Py. 5179. Anthistiria — Py. 5180. Antholyza — Py. 5953. Anthurium — Py. 5903, 6098. Antidesma — Py. 4403, 5864. Antirrhinum — Py. 6571. Apium — Di. 7156, 7205, 7620. Apocynum — Di. 7225. Apodytes — Py. 4330. Apuleia — Py. 4762, 5233, 5344 Arabis — Phy. 3460, 3461, 3462, 3463, 3464, 3465. Aralia — Di. 7220. Araucaria — Py. 4931, 5860. Arbutus — Py. 6137. — Di. 7078. Archangelica — Py. 6923. Arcangiopteris — Phy. 3437. Arctostaphylus — Py. 7000. — Di. 7444, 7499. Ardisia — Py. 4501, 4766, 4769. Areca — Py. 5703, 5891, 5941. 5999. Arenaria — Py. 6729. Arenga — Pv. 5056, 5371, 5892, 5907, 5942, 5962, 6000, 6001, 6040, 6329, 6391, 6413, 6465, 6492, 6633. — Di. 7404. Aristolochia — Py. 6103. Armeria — Py. 6560. Arrabidea — Py. 4365. Arrhenaterum — Py. 6583. Artemitia — Pv. 6510.

Arthraxon — La. 3550. — Pv. 6144. Arthrostemma — Py. 4836. Arthrostylidium — Py. 4333. 6964. Artocarpus — Py. 4495, 4656. Arundinaria — Py. 4320, 6584 Arytera — Py. 4548. Asparagus — Py. 4711, 5439. 6458, 6553, 6816. Asperula — Py. 6721. Asphodelus — Py. 6382. Aspidium — Py. 5043. Aspidosperma — Py. 5148 Aster — Di. 7376. — Phy. 7685. Astragalus — Py. 5928, 6177, 6700, 6701, 6736, 6737, 6763, 6773 Astrocaryum — Py. 4712, 5943. Astronia — Py. 4837. Atraphaxis - Py. 6770. Atriplex — Phy. 3444. — Py. 5774, 6628. Atropa — Py. 6232. — Di. 7709. Aucuba — Py. 6435. Averrhoa — Py. 6039. Avicennia — Pv. 4571. Baccharis - Py. 4206, 5720. Bactridis — Py. 4259. Bambusa — Py. 4622, 4773, 4774, 5182, 5183, 5184, 5185, 5186, 5187, 5188, 5317, 5318, 5319, 5327, 5352, 5354, 5419, 5437, 5493, 5578, 5580, 5583, 5617, 5659, 5684, 5841, 5845, 5869, 5870, 5921, 5922, 5959, 5971, 5991, 5992, 5993, 6155. 6287, 6318, 6326, 6328, 6376, 6402, 6407, 6408, 6504, 6517, 6526, 6794, 6831, 6835, 6847, 6848, 6849, 6874, 6956. — Di. 7138, 7159, 7284, 7295, 7333. Bambusaceae — Py. 4693. Banana — Di. 7101. Banisteria — Py. 4472, 5256, 5456.

Barbarea — Phy. 3466. Barleria — Py. 5736, 5926. Barringtonia — Pv. 4440, 4441, 5926. - Pv. 4443, 5002, Bauhinia 5022, 5028, 5818, 6876. Beckera — Py. 5188. Beilschmiedia — Py. 4955. Bellis — Di. 7621. Beloperona — Py. 5491. Berberis — Di. 7326. Berteroa — Phy. 3467, 3468. Bertholletia — Ph. 3352. Beta — Phy. 3366, 3419, 7684. Betula — Py. 5718, 5842, 6502, 6760, 6824. — Di. 7063, 7141, 7213, 7229, 7553, 7554, 7555, 7556, 7596. Bignonia — Py. 4280, 5586, 6680. Bignoniaceae — Py. 4369, 4621, 4738, 4921, 5854, 6109. Bischofia — Py. 5169. Biscutella — Phy. 3469. Blepharoneurus — Py. 5189. Blumea — Py. 6371. Boehmeria — Phy. 3379. — Py. 5711, 5784, 5815, 5837, 6806. - Di. 7241. Boerlagiodendrum — Py. 4358. Boscia — Py. 4372, 6490. Bourreria — Py. 5154. Bouteloua — Py. 6695. Brassica - Phy. 3470. Braynia — Py. 4820, 4821. Bridelia — Py. 6141. Briza — Py. 6735. — Di. 7201. Bromelia — Py. 4336, 5910. Bromeliaceae — Py. 7011. Bromus -- Phy. 3375. -- Py. 6156. Brownea - Py. 4748. Buchmania — Py. 4344. Buddleia — Phy. 3522. Buellia — Di. 7478. Buetneria - Py. 4877, 5303, 5546: Bulnesia — Py. 6986, 6987. Bunias — Phy. 3471.

Bupleurum — Py. 6275, 6574, 6765.

Burchellia — Py. 5390.

Bursera — Py. 6869.

Büttneria vide Buetneria

Buxus — Py. 6448. — Di. 7128

Byrsonima — Py. 4473.

Cabralea — Py 4669. Cacalia — Py. 6534. Caesalpinia — Py. 4444, 6630. Cajanus — Pv. 5709, 5867, 5929, 6505, 6798. Calamagrostis — Di. 7231. -Hymen. 7650. Calamus — Py. 4907, 4939, 4970. 5004, 5034, 5827, 5944, 6002, 6330, 6640, 6782, 6839, 6880. Calceolaria — Phy. 3536. Calepina — Phy. 3472. Callistemon — Py. 7689. Callicarpa — Py. 4572, 4573. Calligonum - Py. 6634. Calluna - Py. 6514. - Di. 7232, 7269, 7453. Calophyllum — Py. 4338, 4426. Calopogonium — Py. 4445, 4451. — Di. 7043. Caltha — Phy. 3391. Calyptranthus — Py. 5270. Camelina — Phy. 3473. Camellia — Py. 4325, 4657, 5691, 5715. — Di. 7206. Campanula — Py. 6627, 6682. Campomanesia — Py. 4780, 5271.

4371, 4800, 4896, 5072. — Di. 7441.

Canavalia — Py. 5930.

Canna — Py. 5798.

Cannabis — Py. 5266, 5483, 5974, 6593.

Canthus — Py. 4863.

Capparis — Py. 4744, 4801, 4802,

Canarium — Py. 4316, 4370,

Campyloneurus — Py. 6932.

Campylopus — Di. 7161.

5679, 5856, 6017, 6449, 6533. 6791, — Di. 7378, 7379. Capsella - Phy. 3474. Capsicum - Py. 4559. - Phy. 7580. Caragana - Py. 5234, 5434, 5931, 6178. Cardamine - Phy. 3475, 3476. Carex — Ur. 7572. — Py. 6538, 6539, 6582, — Di. 7176. 7218, 7358, 7359, 7392. Carica -- Phy. 7680. -- Pv. 4203, 6113, 6807. Carpinus — Py. 4237, 5631, 5651, 6422, 6446, 6480, 6650, 6871, 6933. — Di. 7331. Carum — Di. 7620. Carya — Py. 5804, 6170, 6827. Caryota — Py. 6003. Casearia — Py. 4414, 4739, 5039, 5172, 5173, 5453, 5816. Cassia — Py. 4445, 4447, 5235, 5237, 5695. Castanea - Phy. 3409. - Pv. 4610, 5379, 5800, 5801, 6819, 5845. — Di. 7606. Castanopsis — Py. 6147. Castilloa — Py. 6430. Casuarina — Py. 6894. Cayaponia — Py. 4318, 4391. Ceanothus — Py. 5640, 5792, 5834, 5835, 6392, 6775. Cecropia — Py. 4624. Cedrus — Py. 6995. Celastrum — Py. 4374, 5008, 6450. Celsia — Phy. 3537. Celtis — Py. 4326, 4566, 4567, 4648, 5025, 5032. Cenarrhenes — Pv. 6961. Centaurea — Py. 5653.

Centotheca — Py. 5190.

Cephalotaxus — Pv. 5861.

4679.

3442.

Centranthus — Py 6245, 6246.

Cephalaria — Phy. 3509. — Py.

Cerastium — Phy. 3440, 3441,

Cerasus — Py. 5730, 7084, 7550. Cercis — Py. 6361. Cercocarpus — Py. 5729. Ceropegia — Py. 5149. Cestrum — Py. 4560, 4685. Chaerophyllum — Phy. 3560. — Di. 7620. Chamaecrista — Py. 4448. Chamaecyparis — Py. 4776, 6996. Chamaerops — Py. 6520, 6950. Champereia — Py. 4546, 4868, 4869 Chapmania — Py. 4306. Cheiranthus — Phy. 3477, 7685. Chenopodium — Phy. 3446. 3447, 3448, 3449, 3450, 3451, 3452. Chiococca — Py. 4522. Chionanthus — Py. 5429. Chloris - Py. 5416. Chorispora — Phy. 3478. Chrysanthemum — Phy. 3456. — Di. 7625-26. Chrysobalanum — Py. 6215. Chrysophyllum — Py 4870, 4871. Chrysothamnus - Py. 6652, 6943. Chuquiragua — Py. 5654, 6689, 6748, 6749, 6948. -- Di. 7523. Cichorium — Phy. 3337. Cinnamomum — Py. 5904, 6551. Cipadessa — Py. 4842. Cirsium — Py. 6609. — Di. 7208, 7224, 7282. Cissus — Py. 4581, 4582. Cistus — Py. 6359. Citrus — Hymen. 7647. — Phy. 3431. — Py. 4537, 4538, 4539, 4635, 4650, 5078, 5430. 5496, 5705, 5783, 5810, 6220, 6221, 6415, 6442, 6484, 6497, 6635, 6719, 6881, 7693-7700, 7705. — Dic. 7032, 7545. 7607. Clematis — Py. 5507, 6213, 6321, 6626. — Di. 7498. Cleome — Py. 6721.

Clerodendron — Py. 4574, 5734. 6419. Clidemia — Py. 5548. Clusia — Pv. 4427, 5873, 6165, 6166. — Di. 7454, 7455. Cluytia — Di. 7631. Coccocarpia — Di. 7463. Coccoloba — Py. 4472, 4986. Cocculus — Py. 6303. Cocolobus — Pv. 5122. Cocos — Py. 4723, 5704, 5945, 5984, 6004, 6645 Coffea — Py. 4634, 5032, 5541, 5947, 6473, 6564, 6565, 6599, 6804. Coix — Py. 6795. Coleosanthus — Py. 6535. Coleus — Py. 4432. Collea — Py. 4607. Colliguaia — Py. 4404. Colocasia — Py. 6099. Columbia — Py. 6238. Colutea — Py. 5661, 5806, 5825, 5839, 6702. Comocladia — Py. 4345. Compositae — Py. 4262, 5376. Condalia — Py. 6341, 6940, 6985, 6989. — Di. 7031, 7414. Coniferae — Py. 5960. — Di 7110, 7312, 7506. Conium — Phy. 3558. Connarius — Py. 4384, 5026, 5160. Conocephalus — Py. 5109. Convolvulus — Py. 6750. Coprosma — Py. 6983. Corchorus — Py. 5647. Cordia - Py. 4281, 4315, 4669. 5155, 5914, 5958, 6317. Cordylines — Py. 6190. Conrigia — Py. 3479. Cornus — Py. 5368, 5633, 5682, **5775, 5786, 6325, 6349, 6372,** 6528. — Py. 5876, 5906, Coronilla 6437, 6553, 6703, 6721. Coronopus — Phy. 3480.

Corylopsis — Di. 7253. Corylus — Py. 4252, 4991, 5737. 6679, 6942. — Di. 7109, 7549., Corvoha — Py. 4751, 6005, 6327, 6852. Crataegus — Py. 5828, 6043, 6216, 6483, 6495, 6622, Cratylia - Py. 5238. Crepis — Phy. 3547. — Di. 7613, 7614. Crossandra — Py. 4793. Crotalaria — Pv. 4309. Croton — Py. 4822. Cryptocarya — Py. 5096. Cucumis — Py. 5422, 6132. Cucurbita — Py. 5440, 6581. Cucurbitaceae — Py. 4392. Cunninghamia — Py. 6127 Cupania — Py. 4549. Curcuma — Di. 7560. Cussonia — Py. 4361. Cyathea — Py. 4301, 5417. — Di. 7180, 7253, 7254, 7434. Cyclostemion — Py. 4997, 5009. Cydonia — Py. 5779, 5946. Cymbidium — Py. 5975. Cynanchum — Di. 7328. Cynodon — Py. 6288. Cynomarathrum — Ur. 7674. Cynomatra — Py. 4949. Cyperus — Py. 5316, 5602, 5603. Cystandra — Pv. 6334 Cytisus — Py. 5753, 7267.

Dactvlis — Py. 5552, 6157. —
Di. 7160.

Daemonorops — Py. 4742, 4781, 4855, 6001, 6041, 6331, 6801.

— Di. 7411.

Dalbergia — Py. 5239, 5240, 5242, 5302, 5701.

Daphne — Py. 5464, 6237.

Daphniphyllum — Py. 6142.

Dasymaschalon — Py. 4314, 5494.

Datura — Py. 6567.

Daucus — Py. 6574. Daviesia — Py. 6380. Delphinium — Py. 6465. Dendrobium — Py. 4692. Dendrochilus — Pv. 6208. Dentaria - Phy. 3481. Derris — Py. 4449, 4450, 4832, 4903, 5003, 5241, 5243, 5244, 5345, 5449, 6482, 7014. — Di. 7472. Desmodium — Py. 4307, 4452, 4453, 4454, 6052, 6362. Dianthera — Di. 7025. Dianthus — Py. 6114, 6684, 6685. Dichapetalus — Py. 5010. Dicksonia — Di. 7214, 7374. Dicotyledoneae — Py. 4584. 4585, 4586, 4587, 4536. Didymopanax — Py. 6102. Diedickea - Py. 4329. Dieffenbachia — Py. 4359. Dillenia — Py. 4812, 4813, 5587, 6999. Dimeria — Py. 5191. Dimerocalyx — Di. 7159. Dinochloa — Py. 4612, 5871, 5923. Dioscorea — Py. 4665, 4698, 4814, 6134. Diospyrus — Py. 4397, 4398, 5021, 6135. Dipholides — Py. 4556. Diplotaxis — Phy. 3482. Dipteris — Py. 4724. Dipterocarpus — Py. 4898, 5167. Discidia — Py. 5150. Dissochaeta — Py. 5288. Docidium - Phy. 3382. Dolichos — Py. 5236, 6292. Dombeya — Py. 5288. Donax — Py. 4420, 5192, 5193, 5194, 5601, 5994, 5995, 6319, 6779, 7013. Draba — Phy. 3483...

Dracaena — Py. 6710.

Dracontomelus — Py. 4346.

Drimys — Py. 6198. Dryas — Py. 6958. Drymaria — Py. 5915, 6115. Drypteris — Py. 5170. Dumasia — Py. 6508. Durio — Py. 5367. Dussia — Py. 5127. Duvaua — Py. 5844, 6488, 6670, 6946. — Di. 7409. Dysoxylon — Py. 4484.

Ebenus — Py. 6629. Edgeworthia — Py. 5079. Ehretia - Py. 5719. Elaeocarpus — Py. 4390, 4819. Eleagnus — Py. 4818, 4900, 5628, 5655, 6405, 6740. Elymus — Py. 5608, 6267, 6436, 6585. Embelia — Py. 5166, 5427, 5917. Endospermum — Py. 6143. Engelhardtia — Py. 5221. Entada — Py. 5252. Epilobium — Di. 7212. Ephedra — Py. 5838, 5920, 6693, 6694, 6734, 6778, 6809. Equisetum — Py. 6136. Erigeron — Py. 4297. Eriochloa — Py. 5195. Eriodendron — Py. 6358. Erica — Py. 6980. Eriobotrya - Py.6596, 6597, 6715 Erlangea — Py. 6119. Erophila — Phy. 3484. Eryngium — Py. 6242. Erysimum — Phy. 3486. Erythrina — Py. 4455, 4669, 5525, 5526. Erythropalum — Py. 6207. Erythroxylon — Py. 4669, 6140. — Di. 7488, 7619. Escallonia — Py. 5123.

Di. 7185, 7210. Festuca — Py. 7702. Ficus — Phy. 3435. — Py. 4241, Espeletia — Py. 5156. Filices — Py. 4676, 5069, 5588, Eucalyptus — Py. 4251, 5803, 6390, 6836. — Di. 7081, 7012. — Di. 7286, 7126, 7315, 7504. 7443, 7559, 7707. Euchlaea — Py. 4760.

3566, 3567. Eugenia — Py. 4599, 4602, 4603, 4641, 4671, 4844, 4845, 4846, 4892, 4938, 4960, 4989, 5015, 5033, 5272, 5273, 5274, 5585, 6809, 5887, 6205, 6463, 6619. 6625, 6733, 6879. — Di. 7030, 7033. Eupatorium — Py. 4337, 4379, 5338, 6120, 6653, 7024. — Di. 7223. Euphorbia — Phy. 3510, 3511, 3512, 3513. — Py. 5100, 5584, 5680, 5865, 6542, 6741, 6825. — Di. 7029. Euphorbiaceae — Py. 5723. Eurastrum — Phy. 3485. Eurotia -- Phy. 3426. -- Py. 6281. Eurya — Py. 5291, 6234. Euterpes — Py. 5690. Evonymus — Py. 4992, 5028, 5772, — Di. 7436. Exocarpus — Py. 4547.

Euchlaena — Py. 3564, 3565,

Fagara — Py. 4865, 6601. Fagopyrum — Di. 7163. Fagraea — Py. 4467, 4957, 6331, 6832.

Fagus — Phy. 7685. — Py. 4239, 6542, 5752, 5762, 6026, 6088, 6512, 6515, 6516. —

4497, 4498, 4499, 4763, 5021, 5110, 5111, 5112, 5113, 5114, 5115, 5116, 5117, 5118, 5119, 5120, 5121, 5129, 5130, 5131, 5132, 5133, 5134, 5135, 5136, 5137, 5138, 5145, 5378, 5936, 5937, 6201, 6557, 6674, 6714, 6878. - Di. 7275, 7447, 7635. 5970, 6724, 6936, 6962, 6963,

Fimo — Phy. 3326, 3327, 3330, 3341, 3346, 3348, 3349, 3352, - Pv. 5445, 5446, 5954, 6063, 6066, 6067, 6070, 6074, 6076, 6078, 6079, 6080, 6081, 6082, 6089, 6090, 6767, 6813. 6897. — Di. 7056, 7114, 7115, 7116, 7117, 7118, 7124, 7138, 7298, 7299, 7300, 7301, 7302, 7303, 7304, 7305, 7314. Flacourtiaceae — Py. 4782. Flagellaria — Pv. 5743. Forsteronia — Pv. 4349. Fourcroya - Py. 6404. Fraxinus — Py. 4242, 5763, 6423, 6632. - Di. 7232, 7252, 7470. Freycinetia — Pv. 4699, 5893, 6853. Fritillaria — Di. 7595. Fungi — Phy. 3360, 3364, 3365, 3411, 7681. — Py. 4261, 4276, 4313, 4608, 5420, 5473-5475, 5501, 5524, 5531, 5532, 5533, 5546-5551, 5560, 5562, 5563, 5564, 5616, 5644, 5**74**0, 5998, 6028, 6364, 6365, 6406, 6423, 6644, 6846. 7035, 7313, 7321, 7380, 7527, 7558, 7622, Funtumia — Py. 4350, 5452. Gadua — Py. 5582, 5685. Gahnia — Py. 6971. Gaillonia — Ph. 6717. Galactia - Py. 4451, 5877. Galearia — Py. 4998. Galipea — Py. 4540. Galium - Phy. 3530, 3531, 3532, 3533, 3534. Galopina — Py. 4523. Garcinia — Pv. 4428, 4429, 5024. 5032, 6917. Gaultheria — Py. 4761, 6541. — Di. 7419. Gaylussacia — Py. 4400. Genista — Py. 4690, 5790, 6637, 6704, 6721.

Gentiana - Py. 6153, 6973. -Di 7567, 7568, 7569, 7570, 7599, 7600, 7600, 7608. Geranium - Pv. 6815. Gesneria — Py. 4418, 5847. Gigantochloa — Pv. 4653, 5055. 5075, 5341, 5354, 5626, 5805. 6029, 6409, 6623, 6901. — Di. 7289. Gilia — Phy. 7685. Gleditschia — Pv. 4456. Gleichenia — Py. 5074. Gliricidia — Py. 4457, 5494, 5662, 5698, 5727, 5728, 5777, 6877, 6914. — Di. 7340. Globba — Di. 7561. Glochidium — Pv. 4823, 4824, 5171. Gluta — Py. 6870. Glyceria — Di. 7291. Glycine - Phy. 3519. - Py. 6179. Glycosmis — Phy. 3541. — Py. 4866, 5008, 5284. Gmelina — Py. 4293, 4575, 4913. Gnipa - Py. 5297. Goniothalamus -- Py. 4989, 6278. Gonzalagunia — Pv. 4331. Gouania - Py. 4520, 5144. Graminaceae — Py. 5473, 6028, 6425, 6788, 6896, 6910, 7003. — Di. 7243 Grammatophyllum — Py. 4750. Grewia — Py. 6625, — Di. 7261. Grindelia — Py. 6536. Guadua — Py. 5438, 6410, 6938. Guarea — Py. 4486, 4487, 5885. Guazuma — Py. 5289. Guettardia — Py. 4685. Guioa — Py. 4550, 4944. Gustavia — Py. 5001. Gymnanthes — Py 4405. Gymnosporia — Pv. 4295, 4375, 4376. Gyrolophium — Di. 7512. Gyrophora — Py. 6366.

Halimodendrum - Py. 6721, 6774. Hamamelis - Py. 5973. Heckeria - Py. 6807. Hedera — Py. 6489, 6935. — Di. 7427, 7505, 7637. Hedycaria — Py. 4979. Helianthemum — Phy. 3455. Helicia — Py. 4971. Heliconia - Py. 5399. Helicteres — Py. 5898. Helleborus — Py. 5397, 6214, 6595. Helminthia — Di. 7615. Hemerocallis — Di. 7278. Hemisepta — Phy. 3548. Henriquesia — Py. 5105. Heptapleurus — Py. 4930, 7010 Heracleum — Py. 6065, 6575. — Di. 7387, 7620. Hermodactylon — Pv. 6589. Hervittia - Py. 4389. Hesperis — Phy. 3487. I-leterospatha — Py. 5124. Heterotricum — Py. 5258, 5882 Hevea — Py. 4406, 4670, 4932, 5470, 5523, 5573, 5623, 5656, 5683, 5695, 5712, 5833, 5848, 5849, 5866, 6144, 6145, 6271, 6284, 6337, 6872, 6900, 6972. Di. 7344. Hibiscus — Py. 4475, 5471, 5556, 5687, 6460, 6663. Hicoria — Py. 6519. Hieracium — Py. 6121. Hippocratea — Py. 4431, 5029. Hippophaë — Di. 7327, 7413. Hirtella — Py. 5281. Holcus — Di. 7242. Holecalyx — Py. 4833. Homalanthus — Py. 6146. Homalium -- Py. 4680. Homonoia — Py. 4407, 5577. Hopea — Py. 4396, 4952, 4981. Hormosia — Py. 4935. Hosta - Py. 6191. Hoya — Py. 4362, 5853, 5913.

Hualania — Py. 6764. — Di. 7207.

Hugonia — Py. 5255.

Humulus — Phy. 3553.

Hydnocarpus — Py. 4902.

Hydrocharis — Di. 7279.

Hydrocotyle — Py. 6243.

Hygrophila — Py. 4343.

Hymanthophyllum — Py. 5911

Hymenoxis — Phy. 3392.

Hyoseris — Di. 7627.

Hypericum — Py. 6167, 6949.

Hyptis — Py. 4433.

Ichnanthes — Py. 5605, 5606. Idesia — Py. 5724. Ilex — Py. 4302, 4357, 4635, 4796, 4925, 5364, 5561, 5912, 6531, 6743, 7009. — Di. 7401, 7438. Impatiens — Di. 7388, 7394. Imperata — Py. 4421, 4745, 5196, 5538, 5843. Indigofora — Py. 4307. Inga — Py. 4283, 4339, 4701, 4922, 5377. Insecta - Phy. 3329-3342, 3354, 3356, 3357, 3358, 3362, 3396, 3405, 3416, 3424, 7676, 7681. — La. 3570 - 4235. — Py. 5479, 5592, 5610, 5611, 5612, 5613, 5614, 5615, 6069, 6355. — Di. 7057, 7058, 7602, 7612. Inula — Py. 6690. — Di. 7219. Ipomea — Py. 4386, 4387, 4759. 5472, 5760, 6130, 6725. Iresine — Di. 7042. Iris - Py. 6168. Isachnes — Py. 5197. Isatis — Phy. 3488. Ischaemum — Py. 5198, 5199, 5416. Ischnosiphon — Py. 6638. Isoglossa — Py. 4313. Iva — Phy. 3569. — Py. 6451. —

Di. 7251.

Laurineae — Py. 4830.

Ixora — Py. 4328, 4524, 4908, 4909.

Jacaratia — Py. 4804. Jacquinia — Py. 4291, 4292. Jaquemontia — Py. 6351. Jasminum — Py. 4852, 4853, 5889, 5890, 5940, 6470, 6513. Jatropha — Py. 4408. Jodina — Py. 5460. Jonaspis — Py. 5934. Juglans — Py. 5660, 5925, 6171. Juncus — Py. 6173, 6291, 6722, 6991. - Di. 7196, 7337, 7238 Juniperus — Py. 4649, 5546, 6691. — Di. 7139, 7543. Justicia — Phy. 3554. — Py. 4630, 5851.

Kalidium — Py. 6746.
Kaulfussia — Phy. 3437.
Kennedya — Py. 5346.
Kerria — Py. 6469. — Di. 7448.
Kigelia — Py. 6532.
Knema — Py. 5021.
Kochia — Phy. 3453. — Py. 4652.
Koelreuteria — Py. 4243.
Kolowratia — Py. 5350.

Lactuca — Di. 7156. Laguncularia — Py. 4378. Lamium — Di. 7595. Lansium — Py. 5014. Lantana — Py. 4341, 4342, 4576. — Di. 7638. Lappa — Di. 7180. Larix — Di. 7355. Laserpitium — Di. 7620. Lasia — Py. 6100. Lasiacis — Py. 5549. Lasiagrostis — Py. 6696. Lasiopetalum — Pv. 5046. Lathyrus — Phy. 3393. 6180. Lauraceae — Py. 4732, 4792, 5227, 5228.

Laurus — Py. 6590. — Di. 7341. 7386. Lavatera — Di. 7245. Ledum, — Py. 4778. — Di. 7389. 7442. Leguminosae — Py. 4465, 5329, 6293. Leotodon — Di. 7616, 7628-29. Lepidium — Phy. 3489, 3490, 3491. Lepidosperma — Di. 7415. Lepisanthes — Py. 4551, 5028. Leptospermum — Py. 7687. Leptostrema — Di. 7489. Leptotaenia — Py. 6726. Lespedeza — Py. 5807, 6705. Leucaena — Py. 5424, 5455, 5480, 5663, 6412, 6457. Leucelene — Py. 6732 Leucosyke — Py. 4569. Liatris — Py. 6537. Libanotis — Py. 6576. Libocedrus — Di. 7061. Lichenes — Py. 4689, 5062, 5347, 5359, 5370, 5476, 5478, 5878, 5879, 5933-5935, 5985-5987, 6033, 6035, 6255-6266, 6294, 6301, 6365, 6367, 6383-6388, 6439, 6487, 6605-6607, 6610, 6611, 6661, 6708, 6709, 6727, 6800. — Di. 7049, 7050, 7211, 7273, 7274, 7460-7462, 7469, 7478, 7482, 7483, 7485. 7487, 7489, 7490, 7493, 7495, 7497, 7508-7520, 7522, 7524, 7525, 7529, 7534, 7535, 7537, 7541, 7542. Licuala — Py. 6802. Ligusticum — Di. 7620. Ligustrum - Py. 4303, 5638, 5791 Limnanthemum — Py. 4305. Linaria — Py. 3394. — Di. 7595. Lindera — Py. 5806, 6379, 6699. Linocera — Pv. 4507, 4508. Linum — Py. 6195, 6441. Liparis — Py. 4854.

Liriodendrum — Di. 7052. Lithachne — Py. 5076. Litsea - Py. 4256, 4435, 4838. 4934, 5222, 5325, 5725, 6034, 6268, 6823, 6875. Livistona - Py. 4512, 6040, 6332, 6506. Lobaria - Di. 7480. Lonchocarpus — Di. 5246. Lonicera — 4311, 4312, 5107, 7439. 5856, 6111. — Di. 7595. Lophatherus — Py. 4613. Lophocolea - Py. 6681. Lophopetalum — Py. 4805. Loranthus - Py. 4468, 4708, 4834, 4904, 6196. Luchea — Py. 4294. Lucuma — Py. 4557, 5333, 5462. Luffa - Py. 4809. Luhea — Py. 4669. Lumitzera — Py. 4434. Lunaria - Phy. 3492. Lunasia - Py. 4542. Lupinus - Phy. 3431. Luzula — Py. 6549. Lychnis — Py. 6116. Lycium — Py. 5673, 5836, 6253, 6742. — Di. 7503. Lycopersicum — Phy. 3431. — Di. 7609. Lycopodium — Py. 6197, 6712. Lysimachia — Pv. 5908. Lythrum — Di. 7226.

Maba — Py. 5168.

Macaerium — Py. 5932.

Macaranga — Py. 4409, 4410.

4647, 5696, 6400.

Macleya — Py. 6211.

Maclura — Py. 5667.

Maesa — Py. 4502, 4503, 4504, 4505.

Magnolia — Py. 5566, 5733.

6713.

Mahonia — Py. 6843.

Malcomia — Py. 6723.

1353 Mallotus — Pv. 4290, 4411, 4655, 5021, 5657, 5658. Malpighiaceae — Py. 4474, 5432. Malus — Phy. 3399. Mammea — Py. 4414. Mangifera — Py. 5803, 6020. — Di. 7440. Manihot — Py. 4670, 5688, 5867, 6793. Mapania — Py. 4394. Maranta — Py. 6556. Marattia - Phy. 3437. Marcgravia - Py. 4477. Markamia — Py. 4366. Marlierea - Py. 5888. Marrubium — Phy. 3376. Marsdenia — Py. 4798. Marsupella - Py. 4688. Matisia — Py. 6579. Matthiola - Py. 3493, 6131. -Di. 7157. Maxillaria — Di. 7039. Mayepea — Py. 4509, 4510, 5277. Medicago — Py. 6706. Medinilla — Py. 5883. Melastomataceae - Py. 4036, 5939, 6461. — Di. 7215. Melia — Phy. 3552, 7686. — Py. 5263, 6389. Meliaceae - Py. 4489, 4843, 5330, 5389. Melica — Py. 6543. Melilotus — Py. 6181, 6738. Meliosma — Py. 5285. Melitta — Py. 4451. Melodorus — Py. 4620. Memecylon — Py. 4478, 4479, 4950, 4985, 5012, 5041, 5259, 5429. — Di. 7445. Menispermaceae — Py. 4494. Menispermum — Py. 6303. Mentha — Phy. 3514.

Merostachys — Py. 4619.

Metastelma — Py. 5151.

Metrosideros — Py. 4604.

Merremia - Py. 4277, 4388.

Metzgeria — Py. 5421. Michelia — Py. 5299. Miconia — Py. 4480, 4481, 4605, **4725**, 4838, 4839, 4937, 5260, 5261, 5619, 5620, 5748. Microdesmis - Py. 4901. Mikania — Py. 4304. Milium — Py. 5872. — Di. 7563. Milletia — Py. 4458. Mischanthus — Phy. 3562. -Py. 5200, 5996, 6377, 6697. Mischocarpus — Py. 4753, 6322. Mitragynes - Py. 4525. Modecca — Py. 4926. Moehringia — Py. 6669. Mollinedia — Py. 4495, 4959. Momordica — Py. 4319, 4810. Monotis - Py. 6353. Monstera — Py. 5953. Morinda — Py. 4526, 4629. Morus — Py. 4248, 4321, 5938, 6304, 6616, 6617, 6891. — Di. 7319. Mouriria — Py. 5262. Muehlembergia — Py. 5201, 6544, 6545. Mulgedium — Py. 6122. Múcuna — Py. 6182. Musa — Py. 5886, 5905, 6087, 6202. Musci — Py. 4689, 5423, 5495, 6203, 6204, 7016. — Di. 7087, 7135, 7259, 7288. Mussaenda — Py. 4527. Myricaria — Di. 7336. Myriophyllum — Phy. 3387. Myrsinaceae — Py. 4501, 5509. Myrsinea — Py. 4890, 5380. Myrtaceae — Py. 4720, 4765, 4849, 4919, 4966, 5275, 5381, 5590, 5998. — Di. 7040, 7186, 7408, 7446. Myrtus — Py. 4749, Narcissus — Phy. 3384. Nardus — Di. 7412. Nasturtium — La. 3494, 3495.

Osbeckia — Di. 7573, 7605.

Nelumbium - Py. 5503. Nemesia — Pny. 3427. Nemopanthes — Pv. 5410. — Di 7323. Neolitsea — Py. 4829, 4956. — Di. 7444. Nepenthes - Py. 5276. Nepeta — Py. 5775, 6721. Nephelium — Py. 4598, 5021. Nephromium — Di. 7517. Nerium — Py. 4646. Neslea — Phy. 3495. Nicotiana - Phy. 3432, 7680 -Py. 6045. — Di. 7366. Nexia — Py. 6862. Nycticalus — Py. 4799. Ochlandra - Py. 5355. Ochna - Py. 5295. Ocotea — Py. 4436, 4437, 4640, 5000, 5125. — Hym. 7652, 5224. — Di. 7038. Olacis - Py. 4850. Clea — Py. 4721, 6320, 6639, 6926, 6976. Olearia — Hymen. 7651. Olyra — Py. 4299, 5569, 6507. Onagra — Py. 6559. Ondina - Py. 4347. Onobrychis - Py. 5455, 5456. Ophiurus — Py. 5202. Opilia — Py. 4511, 4851. Opuntia — Py. 6279. — Di. 7565. Orania — Py. 6395, 6969. Orchideae — Pv. 4768, 4967. 5458. Crnithogalum — Phy. 3388. Orobus — Di. 7623. Oryza — Py. 3361, 3563, 5553. 5957, 6086, 6587, 6796. Oryzopsis — Py. 5203.

Osmanthus — Py. 4518.

Osmunda — Py. 5097, 5351.

Nectandra — Py. 4367,

5874.

5223.

Ostodes — Py. 4825. Ostrya - Py. 6818. Othophera - Py. 4417. Oxonopus - Py. 5181. Oxytropis — Phy. 3517. Pachysandra — Py. 5391. Paeonia — Di. 7007. Pahudia — Py. 5247. Palaquium — Py. 5005. Paliurus — Py. 5668, 5714. Pallenis — Di. 7630. Palmae — Py. 4736, 4856, 4972, 5058, 5579, 6008, 6210, 6520. — Di. 7165, 7417. Panax — Di. 7155. Pandanus — Py. 4681, 4700, 4740, 4940, 5057, 5988, 6009, 6010, 6269, 6306, 6425, 6841. • Di. 7456. Panicum - Py. 4422, 4788, 5204, 5205, 5206, 5207, 5208, 5209, 5356, 6429, 6797. — Di. 7183. Paralstonia — Py. 4351. Paramygnya — Py. 4746. Parashorea — Py. 4816, 4817, 4982. Parathesis - Py. 4506. Parinarium — Py. 4983. — Di. 7420. Parkia — Py. 5011. Parkinsonia - Py. 4284. Paronychia — Py. 7703. Paspalum — Py. 5210, 5211, 5212, 5357, 6360. Passiflora — Py. 4694, 4857, 5027, 5426, 7006. Paullinia — Py. 4340, 4414, 4552, 5621. Paulownia — Py. 5645, 5719. 5733, 6229, 7407. Pavetta — Py. 4041. Pedicularis - Phy. 3538. Peganum — Py. 6720. Peltidea — Py. 6262.

Peltophorum — Py. 5248.

Penicillaria — Pv. 5539, 5799, 5972. — Di. 7446. Pennisetum — Py. 5213, 6289. Pentacme — Py. 4953. Pera — Py. 4670. Pericampylus — Py. 6200. Persea — Py. 4438, 4439, 4789, 4790, 5225, 5803, 6176. Petunia — Phy. 7685. Phaca — Phy. 3516. Phanera — Py. 5249. Phaseolus — Py. 5250, 5428. 6179, 6183, 6508, 6650. Phillirea — Py. 5639. Phillosporina — Di. 7515. Philodendrum — Phy. 3360. — Py. 4990. Phoebe — Py. 5226. — Di. 7038. Phoenix — Py. 5366, 6006, 6007, 6493. — Di. 7564. Phlomis — Py. 5686, 6174, 6723 Phlyctis — Di. 7540. Phoradendrum — Py. 4835. Phormium — Py. 5955. Phragmites — Py. 6030, 6527, 6546, 6588, 6990. — Di. 7195. Phyllocladus — Py. 6978. Phyllostachys — Py. 4675, 5530, 5551, 5618, 6158, 6159, 6401, 6518. Physocarpum — Py. 5282. Physostegia — Phy. 3356. Phyteumia — Phy. 3374. — Py. 6728. Phytolacca — Py. 4513. Picea — Py. 4313, 6024, 6525 Picramnia — Py. 5331, 5609, 6613. Picrasma — Py. 4875. Picris — Di. 7617. Pilea — Py. 4570. Pilocarpus — Py. 4543. Pinanga — Py. 4912. Pinus - Phy. 3381. - Py. 4770, 4771, 4777, 6128, 6252, 6952, 6993, 6997, 6998. —

Di. 7065, 7066, 7071, 7072. 7073, 7093, 7145, 7166, 7194. 7250, 7332, 7384. Piper — Pv. 4367, 4514, 4515, 4516, 4517, 4654, 4734, 4858, 4859, 5016, 5392, 5420, 5563, 5591, 5894, 7691. Piptadenia — Py. 4271, 5251, 6851. Pipturus — Py. 4881. Pirola — Pv. 4682. — Di. 7162. Pirus — Py. 5641, 5733, 5780, 5976, 6470, 6598. — Di. 7044, 7164, 7324, 7383. Pistacia — Py. 4253, 6842. Pithecolobium — Py. 5323, 5433, 5664, 6399. Pittosporum — Py. 4286, 4519, 4827, 4860. Pituranthus — Py. 5900. Plantago — Py. 4323. Platanus — Py. 4246, 6427, 6494 Platea — Pv. 4827. Plectronia — Py. 4529, 4910, 5896. Plocama — Py. 5671, 6718. Poa — Py. 5214. Podocarpus — Py. 4289, 4381, 4382, 4597, 6927, 6928, 6929, 6930, 6931. Pogonatherus — Py. 5215. Policourea — Py. 4528. Pollinia — Py. 5216. Polyalthia — Py. 4795, 5147. Polygala — Py. 5895. Polygonum — Py. 3523, 6307, 6481. Polymnia — Pv. 5157 Polyosmia — Py. 4329. Polygonum — Py. 5217. Pometia — Py. 5005. Populus — Py. 5628, 5794, 6222. 6311, 6416, 6498, 6636, 6671, 6673, 6756, 6757. 7217, 7236, 7421. Porina — Di 7491. Potentilla — Di. 7190

Pothus - Py. 4797. Premna - Py. 4273, 4327, 4577, 4882, 4911, 5294, 5676, 6248, 6395, 6397. — Di. 7290. Prenanthes — Py. 6123. Primula - Py. 7704. Prosopis — Py. 6381, 6707, 6751. 6752, 6974, 6989. 7477, 7501, 7503. Protea — Py. 5332, 5402, 6594. Prunus — Py. 4642, 4702, 5059, 5459, 5481, 5622, 5643, 5707, 5731, 5732, 6764, 5781, 5977, 6044, 6060, 6217, 6272, 6432, 6563, 6647, 6754, 6776. — Di. 7235, 7348, 7373, 7449. 7450, 7451. Pseudococcus — Phy. 3355. Pseudocymopterum — Ur. 7675. Pseudoelephantopus — Py. 4380. Pseudotsuga — Di. 7385. Psidium — Py. 5637, 5739, 6464, 6509, 6924, 7005. — Di. 7192. Psoralea — Pv. 3371, 4308. Psychotria - Py. 4530, 4531, 4532, 4730, 4945. Pterocarpus — Pv. 4240, 4459, 5128, 5315, 5340, 5369, 5817 Pterocarya — Py. 6172. Pterospermum — Py. 5290. Ptychosperma — Py. 5425. Pueraria — Py. 4460. — 7188. Pulmonaria — Phy. 3438. Pusaetha — Py. 5252. Pycreus — Py. 5163. Pygeum — Py. 4264. — Di. 7266. Quamoclidium — Py. 6558. Quercus — Py. 4245, 4639, 4933, 5095, 5108, 5441, 5574, 5634, 5635, 5721, 5722, 5750, 5761, 5801, 5802, 5961, 6085, 6148,

6149, 6150, 6285, 6286, 6336,

6373, 6374, 6375, 6454, 6528,

Pothoideus — Py. 4929.

6762, 6772, 6812, 6838, 6873, 6970. — Di. 7035, 7059, 7062, 7069, 7074, 7075, 7076, 7077, 7078, 7232, 7288, 7398, 7461.

Quisqualis — Py. 4807.

Radermachera — Py. 4300.
Ramisia — Py. 4906.
Randia — Py. 4942.
Ranunculus — Phy. 3526, 3527, 3528, 3529.
Raphanus — Phy. 3419.
Ravenela — Py. 5139.
Reaumuria — Py. 6394.
Reedia — Py. 4811.
Rhabdodendrum — Py. 4867.
Rhacoma — Py. 4377.
Rhamnus — Py. 5778, 6467, 6753.
Rhaphydophyllum — Di. 7507.
Rheedia — Py. 4999, 5077.

Rheedia — Py. 4999, 5077. Rheum — Phy. 3524. Rhizocarpus — Di. 7462, 7469, 7525.

Rhododendron — Py. 5636, 6138. — Di. 7233.

Rhodomyrtus — Py. 4322. Rhopala — Py. 5280.

Rhus — Py. 4665, 5699, 5733, 5756, 6444.

Rhynchosia — Py. 4309. Rhynchospora — Py. 5862.

Ribes — Py. 5672, 5978, 6225, 6226, 6805. — Di. 7566.

Ricinus — Py. 4923, 5918. — Di. 7158, 7172.

Robinia — Py. 5831, 6184, 6185. — Di. 7177, 7470.

Rollinia — Py. 4928.

Roripa — Py. 3497, 6491. Rosa — Py. 4683, 5642, 5782, 5793, 5909, 6092, 6316, 6389.

6471, 6472. Rosmarinus — Py. 6965.

Rottboellia — Py. 4423, 5218, 5713, 6323.

Roupala — Di. 7048.

Rourea — Py. 4385, 5162, 6129.

Roystonea — Py. 5278.

Rubia — Py. 6566, 6600.

Rubiaceae — Py. 4288, 4703, 4943, 4975, 5063, 6219

Rubus — Py. 4643, 4684, 5321, 5335, 5503, 5534, 5670, 6218, 6277, 6431, 6485, 6496, 6528, 6941, 6966. — Di. 7045, 7239, 7452.

Rudolphia — Py. 4461.

Rumex — Py. 6212.

Ruscus — Py. 5555, 5880, 6037, 6591.

Saccharum — Phy. 3331, 3333, 3564. — Py. 4424, 5219, 5829, 6160, 6161, 6787, 6826, 7690, 7706.

Salix — Phy. 3378, 3422. — Py. 4659, 5101, 5644, 5649, 5795, 5822, 5846, 6064, 6223, 6274, 6275, 6343, 6344, 6417, 6418, 6443, 6758, 6811, 6833, 6834. — Di. 7229, 7342, 7349.

Salsola — Phy. 3454. — Py. 6747, 6770.

Salvia — Py. 6339, 6550, 6698, 7595.

Sambucus — Py. 5772, 6112, 6524, 7221.

Sandoricus — Py. 4490.

Sanguisorba — Di. 7431.

Santiria — Py. 4897.

Sapindaceae — Py. 4269, 4553, 5141, 5461, 5557, 5814, 6474.

Sapindus — Py. 4554, 6224.

Saponaria — Py. 6730.

Sapotaceae — Py. 5018. Sarothamnus — Py. 6799.

Sasa — Py. 4334, 6424, 6656.

Saurauia - Py. 4596.

Sauropus — Py. 4412. Sauvagesia — Py. 4367.

Saxifraga — Phy. 3535. — Py. 5963, 6227.

Scaevola - Py. 4419. Schefflera — Py. 4678, 5008. Schima — Py. 5292. Schinus - Di. 7047. Schizolobium — Py. 4462. Schizonotus — Py. 5630. Schizophragma — Py. 6228. Schizostachvum — Hym. 7655. — Pv. 4258, 4623, 4653. 5033, 5040, 5320, 5358, 5565, 5589, 5991, 5997, 6031, 6032, 6290, 6354, 6456, 6624, 6850. Schlegelia — Py. 4367, 5153. Schoenus — Py. 5164. Scirpus — Py. 4395, 5863, 6540, 7391, 7701. Scleria - Py. 5568. Scleropogon — Py. 6479. Scolopia — Py. 4826. Scrophularia — Py. 6230, 6312. — Di. 7416. Scutia — Py. 4521, 4752, 6511. Secale — Py. 5554, 5616. Semerocarpus — Py. 4662, 4988. Senecio — Py. 6944, 6967. Serjania — Py. 4555, 5286. Sersalisia — Py. 6365. Sesamum — Phy. 3436. Setaria — Py. 5220. Shepherdia — Py. 5628. Shorea — Py. 4899, 4954. Sida — Py. 4476. Sideroxylon — Py. 4872, 4873, 4874, 5106, 6744. Sieversia — Py. 6945. Silene — Py. 6117, 6580, 6686, 6687, 6731. Simaruba — Py. 4367. Sisymbrium — Phy. 3498, 3499. 3500, 3501, 3502. — P<sub>v</sub> Smilax — Py. 4466, 5254, 5881. 6192, 6440, 6459, 6554, 6555. 6662. Solanaceae — Py. 4791. Solanum — Phy. 3433, 3434, 7685. — Py. 4323, 4324,

4367, 4562, 4563, 4703, 4784. 4876, 4924, 5287, 5463, 5747, 5948, 6233, 6475, 6568, 6951. Solidago - Py. 5413, 5857, 5858, 5902, 5916, 6124, 6721. Di. 7204. Sonchus — Phy. 3549. — Di. 7618. Sophia — Phy. 3503. Sophora — Py. 5570. Sorbus — Py. 6011, 6342. Sorghum — Py. 6378. Sorocea - Py. 4500, 4695. -Di. 7277. Sparganium — Py. 6602. Spatholobium — Py. 5540, 6091. Specularia — Phy. 3439. Spiraea - Phy. 3377. - Py. 5765, 6012, 6716. — Di. 7191, 7271, 7287. Spondia — Py. 6915. Stachys — Py. 6739. Staphylea — Py. 5674, 6476. Stellaria — Phy. 3443. — Py. 6688. Stenochlaena — Py. 4737. Stenotaphrus — Py. 4425. Stephania — Py. 4958. Sternbergia — Ust., App. 7671. Sterculia — Py. 4287, 5899, 6785. Stictina — Py. 6709. Stigmatostalyx — Py. 4741. Stigmaphyllum — Py. 6199. Stipa — Py. 6033, 6162, 6163, 6547, 6548, 6722. Straussia — Py. 4968. Streblus — Py. 5689, 5696, 5697, 5698, 5702, 5710, 5728, 5808, 5826, 6038, 6973. Strenia — Py. 4257. Strichnus — Py. 4285, 5042. Strombosia — Py. 5032. Strophanthus — Py. 4352. Stryphnodendron — Py. 5339. Styrax — Py. 4565, 4891, 5395, 6854. Symphorema — Di. 7276.

Symphoricarpus — Py. 4611, 5632. — Di. 7178, 7193, 7474. Symphytum — Phy. 3372. Symplocum - Py. 4878, 4879, 5363, 5372, 6280. — Di. 7422. Synedrella — Py. 4993, 5859, 6452. Syringa - Py. 4847. Syzygium — Py. 4847. Tabebuia - Py. 5600, 6110. Tabernemontana — Py. 4349, 6364. Taccarus — Py. 6101. Talauma — Py. 4471, 6784. Tamarindus - Py. 4463. Tamarix — Py. 6572, 6977. Di. 7399. Tanacetum — Py. 6125. Tapiria — Py. 4669. Taxotrophis — Py. 4772. Taxus — Py. 4383, 4638, 4658. Tecoma — Py. 4368. Teesdalea — Py. 3504. Telosma — Py. 4363. Teramnus — Py. 4464. Terminalia — Py. 4718, 4980, 5700. Tetrastigma — Py. 4533, 5025, 5952. — Di. 7395. Tetrazygia — Py. 5884. Teucrium — Py. 6175. — Di. 7403. Thalictrum — Py. 6310, 6561. 6994. Thea — Py. 4631, 4645, 5829, 6047, 6235, 6236, 6363. — Di. 7610. Theobroma — Py. 5482, 5483, 5498, 5675, 5829, 5949, 5950, 5979, 6477, 6759. Thesium — Py. 6739. Thlapsi — Phy. 3505, 3506, 3507.

Thrinax — Py. 5140.

Thrincia — Phy. 3373. Thuja — Py. 5787, 6692. — Di. 7083, 7139, 7357, 7430. Tibouchina — Py. 4265, 4272, 4667. — Di. 7270. Tilia — Py. 5627, 5648, 5767, 5797, 5980, 6239, 6314, 6391, 6499, 6573. — Di. 7189, 7268, 7396, 7470. Tiliaceae — Py. 5293, 5951. Tinospora — Py. 5265. Toddalia — Py. 4544. I rachelospermus — Py. 4353. Trema — Py. 4568. Tremotylium — Di. 7486. Trewia — Py. 5020. Trichilia — Py. 4491, 4492. — Di. 7502. Trichloris — Py. 5607. Trichocladium — Py. 4430. Trichoclines — Py. 5301. Trichostigma — Py. 6786. Tricycla — Py. 6654, 6974, 6985 — Di. 7440. Trifolium — Phy. 3519. — Py. 5253, 6186, 6187, 6438. Trigonella — Di. 7425. Tristachya — Py. 5342. Triticum — Py. 6164. Triunfetta — Py. 4475, 4893. Trochicarpus — Py. 6169. Tromsdorfia — Py. 6783. Tsuga — Py. 6025. — Di. 7063. Turrea — Py. 5389. Turritis — Phy. 3508. Tylophora — Py. 4364. Typha — Py. 6603. Ulmus — Py. 5884, 5624, 6500, 6604, 6664, 6829. — Di. 7470. Umbellularia — Py. 5824.

Uncaria — Py. 4534, 4535, 5017,

6414.

Unguadia — Py. 7692.

Urophyllum — Py. 4864.

Urceola — Py. 4354.

Urostigma — Py. 6462. — Di. 7015.

Uvaria - Py. 4348, 5989.

Vaccinium — Py. 4236, 4779, 5073, 6139, 6276. — Di 7216, 7283, 7347, 7370.

Valeriana — Py. 5901. — Di. 7222, 7292.

Valerianella - Py. 6247.

Vangueria — Di. 7027.

Vanilla — Py. 5850.

Varronia — Py. 6447.

Vatica — Py. 4889.

Vavaea — Py. 4493. Veratrum — Py. 6193, 6711.

Verbena — P. 6777.

Vernonia — Py. 4298, 5158.

Veronica — Py. 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 5796, 6231, 6313, 6393,

6817. — Di. 7433. Viburnum — Py. 4373, 4600. 5080, 5758, 5759, 6615, 6683.

Vicia — Py. 3363, 3520, 3521, 6188.

Vigna — Phy. 3329. — Py. 5428, 6179.

Villaresia — Py. 4775.

Vinca — Py. 4355.

Viola - Py. 6249.

Viscum — Phy. 3399. — Py. 4469, 5745.

Vitex — Py. 4578, 4579. Vitis — Py. 4618, 5741. Vcacanga — Py. 4633. Voandzeia — Di. 7310. Vochysia — Py. 5296.

Walsura — Py. 5065. Washingtonia — Py. 6209. Webera — Py. 4840.

Weigelia — Py. 5969.

Wistaria — Py. 5665. Witania — Py. 6310.

Wormia — Py. 4601.

Wrightia - Py. 4356.

Xanthophyllum — Py. 5032. Xylopia — Py. 5388. Xylosma — Py. 4415, 4918, 5044, 5174, 5175.

Xymalos — Py. 4416.

Yucca — Py. 5418, 6194, 6302, 6592.

Zea — Phy. 3315, 3385, 3431, 3564, 3565, 3566, 3567, 3568. — Py. 5375, 5566, 5924, 6780. — Di. 7635.

Zelkowa - Py. 6244.

Zinzigiber — Py. 6250, — Di. 7571, 7592. — Phy. 7680.

Zizyphus — Py. 4861, 5669.

Zuccagnia — Di. 7503.

## INDEX ALPHABETICUS GENERUM

(Synonyma sunt cursive impressa)

Absidia 9. Acantharia 1132. Acanthomyces 209. Acanthostigma 970. Acanthostoma 366. Acanthostoma Th. 238. Acerbia 1058. Acetabula 1158. Achlya 25, 1331. Achorella 535, 548. Aciculosporium 701. Acrospermum 1128. Actiniopsis 421, 504. Actinocymbe 368, 389, Actinodothis 406, 417. Actinomyxa 533. Actinopelte 530. Adelopus 368, 370. Agostaea 1321. Agyrina 1142. Agyrium 1142. Aithaloderma 368, 376. Alboffia 539. Albugo 33. Aldona 1257. Aleurina 1207. Aiina 236.

Allantonectria 640.

Amazonia 421, 504.

Allescherina 733.

Allomyces 31.

Amerodothis 535, 539. Amerostege 1132. Amorphomyces 100. Amphisphaeria 938. Amphoromorpha 217. Amphoropsis 218. Amylirosa 1338. Angatia 539, 1137. Anisochora 536, 610. Anisomixa 33. Anisomyces 765. Antenella 367. Antennularia 368. Antennulariella 248. Anthomyces 1311. Anthostoma 743. Anthostomella 817. Aphanomyces 28. Aphysa 394, 400. Apiocrea 675. Apiognomonia 705. Apioporthe 705, 751. Apiospora 536, 915, 612. Apiosporella 914. Apiosporium 238, 368. Apiosporopsis 794. Apodachlya 29. Aporhytysma 1259. Arachnomyces 228. Argynna Morg. 238. Armatella 405, 409.

Ascobolus 1221. Ascocorticium 1299. Ascodesmis 1167. Ascophanus 1218. Ascopolyporus 701. Ascospora 778. Ascostratum 1135. Ascotricha 240. Asterella 421, 440. Asteridiella 368, 421. Asteridium 421. Asterina 421, 435, 443. Asterinella 420, 436, 479. Asterocalvx 1243. Asterocustis 1331. Asterodothis 405, 411. Asterolibertia 476, Asteromyxa 420, 488. Asteronia 421, 442. Asteropeltis 421. Asterostomella 421. Asterula 421, 436. Astrosphaeriella 937. Atichia 369, 1299. Auerswaldia 535, 540, Auerswaldiella 534, 541. Aulacostroma 391, 402. Aulographella 420, 427. Aulographium 421, 437, 1113. Autophagomyces 212.

Bagnisiella 1134, Bagnisiopsis 389, 390, 585, Bakeromyces 816. Balansia 539, 696. Balansina 177. Balladina 368, 372. Balladynella 368, 374. Balladynopsis 368, 374, 479, Barlaeina 1168. Basidiophora 67. Belonidium 1213. Beloniella 1212. Beloniopsis 1216. Belonium 1214. Belospora 1182. Benguetia 1208. Bertia 917.

Biatorella 1276. Bifusella 1256. Bionectria 678. Blakeslea 6. Blasdalea 391. Blastociadia 80. Blepharospora 28. Blitrydium 1293. Boerlagella 1023. Bolosphaera 1996. Bordea 106. Boringuenia 702. Botryochora 512. Botryosphaeria 810. Boydia 683. Brachyascus 1143. Breefeldiella 508. Bremia 62. Bremiella 63. Bresadoella 688. Briardia 1247. Broomella 685. Bulgaria 1240. Bulgariastrum 1241. Butleria 1134. Byssonectria #44. Byssonectria 640.

Caenothyrium 420, 450. Calloria 1241. Calloriopsis 1242. Calomastia 829. Calonectria 679. Calopeziza 1216, Calosphaeria 709. Calospora 768. Calosporella 706. Calothyriella 420, 436. Calothyriolum 436, 441. Calothyrium 420, 436, 439, Calyptra 368, 370. Camarotella 536, 620. Camillea 1094. Cantharomyces 95. Cantharosphaeria 923. Capuites 368, 385. Capnodaria 367. Capnodiella 366, 368,

Capnodina 366. Capnodinula 366, 370. Capnodiopsis 366, 369, Capnodium 366, 367, 383, Capnophaeum 366, 384. Castagnella 553. Catacauma 536, 559, 609, 610, 620, 630, Catacaumella 536, 564. Catabotrys 535, 539. Catharinia 1021. Caudella 420, 438. Causalis 1262. Celidium 1297. Cenangium 1226. Cenangella 1231. Cephalotheca 228. Ceraiomyces 139, 153. Ceratochaete 367, 370. Ceratomyces 148. Ceratosperma 223. Ceratosphaeria 1075. Ceratostomella 1069. Cercosphaerella 849. Ceriosporella 962. Ceuthocarpon 707, 1060. Chalcosphaeria 706. Chaetaspis 401, 419. Chaetasterina Bub. 368, 378. Chaetoceratostoma 1070. Chaetolentomita 1072. Chaetomidium 240. Chaetomium 839. Chaetopeltopsis 512, 530. Chaetoplaea 531. Chaetopyrena 961. Chaetosphaeria 1013. Chaetostigmella 257. Chaetothyrina 367, 370, 389. Chaetothyrium 368, 378, 389, 421, 435. Chantransiopsis 216. Chevalieria 389, 391. Cheylimenia 1172. Chitonomyces 88. Chorostate 748-Chromocreopsis 1339.

Chromoventuria 899.

Chrysomyces 237.

Chytridium 20.

Ciboria 1181. Circinella 6. Cirsosia 497. Cirsosiella 497. Cistella 1194. Clathrospora 1039. Claudopus 1322. Cleistosphaeria 236, 238. Cleistotheca Zuck, 238, Cleistothecopsis 1333. Clematomyces 210. Clintoniella 673. Clithris 1270. Clypeolaster 457. Clypeolella 421, 489. Clypeolina 420, 488. Clypeolum 511, 1255. Clypeosphaeria 1007. Clypeostroma 537, 628. Coccidophthora 1018. Coccochora 536, 616. Coccochorella 537, 613. Coccodiella 584. Coccodinium 368, 388, Coccodiscus 534. Coccodothella 534, 549. Coccodothis 534, 549. Coccoidella 531. Coccomycella 1257. Coccomyces 1256, 1267. Coccomycetella 1258. Cocconia 404. Cocconiopsis 416. Coccostroma 534, 539. Cochiyomyces 211. Coelosphaeria 775. Coleroa 394, 398, 900. Colletomanginia 650. Colpoma 1260. Comochlatris 1039. Compsomyces 211. Conida 1296. Conjochaeta 826, 832. Conomela 835. Cookella 1142. Cordyceps 699. Coreomyces 150. Coreomycetopsis 220.

Corethromyces 180. Coronophora 708. Corvnelia 539, 1104. Coscinopeltis 394. Criserosphaeria 1060. Crotone 538, 635, 1131. Cryptandromyces 212. Cryptobasidium 1325. Cryptoderis 1075. Cryptodiscus 1248. Cryptomyces 1259. Cryptomycina 1257. Cryptonectriopsis 742. Cryptopeltis 421. Cryptopus 368, 371. Cryptosphaeria 732. Cryptospora 707, 774. Cryptosporella 705, 743, 1886, Cryptosporina 1131. Cryptovalsa 784. Cubonia 1220. Cucuiomyces 213. Cucurbitaria 1055. Cucurbitariella 837. Cudonia 1157. Cudoniella 1156, Cunninghamella 18. Curreya 538, 637, 1131. Currevella 1024. Curreyella 538. Cyathicula 1194. Cyclodothis 538, 633, 1131. Cycloschizon 404. Cyclostomella 401. Cyclotheca 404, 408. Cyphella 1324. Cystopus 38.

Daldinia 1086,
Darwiniella 538,
Dasypezis 1206,
Dasyphthora 651,
Dasyscypha 1208,
Dasysphaeria 1022,
Davinciella 1214,
Debaryomyces 1816,
Delitschia 947,

Cyttaria 1154.

Dermatea 1225. Dermatodothis 536, 625. Desmotascus 795. Dexteria 703. Dialhypocrea 678. Diandromyces 85. Diaporthe 706, 751. Diaporthopsis 705, Diatrype 736. Diatrypella 741. Dicarpella 748. Dichlaena 228. Dichomyces 87. Dichosporium 589. Discostroma 538. Dictycchora 537, 628, 629, Dictyochorella 587, 629, Dictyodothis 535, 552. Dictyopeltis 511, 513. Dictyothyriella 511, 528. Dictvothyrina 511, 512, Dictyothyrium 511, 512. Didymella 901, 1884. Didymellina 911. Didymosphaeria 589, 927. Dielsiella 101. Dimeriella 287, 247, Dimerina 287, 245. Dimerinopsis 917. Dimeriopsis 260. Dimerium 237, 253, Dimeromyces 68. Dimerosporiella 230. Dimerosporiella 369. Dimerosporina 367, 369. Dimerosporium 237, 242, 421, 478. Dimorphomyces 72. Dioicomyces 101. Dioranotropis 1321. Dipirgis 1294. Diplocarpon 911. Diplochora 632. Diplochorella 537, 632, 634, 1131. Diplocryptis 1248. Diplocystis 1326. Diplonaevia 1248. Diplotheca 538.

Discocera 1275.

Discochora 638. Discodothis 535. Discomvcella 1144. Discophaerina 793. Discostroma 1024. Dissophora 12. Ditopella 706, 807. Ditulis 1294. Dothiclupeolum 617. Dothidasteroma 405, 411. Dothidasterostomella 405, 411. Dothidea 547. Dothidella 535, 545, Dothideopsella 552. Dothideovalsa 535. Dothidina 535, 541, Dothidotthia 636. Dothithyrella 503. Duplicaria 1255. Durandia 1234.

Echidnodella 421, 498. Echidnodes 421, 498. Ecteinomyces 140. Ellisiodothis 406. Elmerococcum 534, 550. Elsinoë 1140. Embolus 1294. Empusa 13. Enchnosphaeria 974. Endodothella 537, 613. Endogone 1319. Endogonella 1320. Endomyces 1304. Endosporella 219. Endothia 706, 760. Englerodothis 534, 549. Englerula 229, 230. Englerulaster 421, 490. Enterobryus 33. Entomocosma 220. Entomophtora 13. Entopeltis 393, 394, 1125. Epibothrys 538, 637, 1131. Epichloë 696. Epicymatia 897.

Dusrhynchis 368.

Epilichen 1278. Epinectria 657. Epipeltis 511. Epiphyma 239. Epipolaeum 1132. Eremotheca 512, 328, Eremothecella 512, 529. Erikssonia 848. Erinella 1217. Eriosphaeria 921. Erostella 709. Euantennaria 223, 363. Enembelis 1294. Eudimeriolum 237, 246. Eudimeromyces 72. Eukarschia 1278. Eu-Leptosphaeria 979. Eumisgomyces 144. Eumonoicomyces 94. Eupropolis 1248. Eurotium 226. Eurvachora 536, 1334. Eurytheca 538, 1195. Euthrypton 229. Eutypa 725, 1386, Eutypella 716, 1836. Euventuria 897. Euzodiomyces 151. Exarmidium 536, 621. Expascus 1300. Exobasidium 1325.

Fabraea 1263
Fenestella 778.
Ferrarisia Sacc. 238, 241, 120.
Fracchiea 777.

Galactinia 1161 Genea 1147. Geopyxis 1159. Geopora 1149. Geoglossum 1157. Gibbera 923. Gibberella 685. Gibberidea 1017. Gibellia 539. Gilletiella 406, 417. Glaziella 647. Gloeopeziza 1238. Glomerella 793. Gloniella 1113. Gloniopsis 111. Glonium 1112. Gnomonia 706, 1072. Gnomoniella 705, 1069. Gnomonina 706. Gnomoniopsis 706. Godronia 1223. Griggsia 639. Griphosphaeria 1024. Griphosphaerioma 924. Graphyllium 1122, 1260. Guignardia 778. Guttularia 240. Gymnoascus 1145. Gymnomyces 1328.

Habrostictis 1245. Haematomyces 1239. Haematomyxa 1243. Halbania 420. Halbaniella 421, 502. Halbanina 476. Halstedia 554. Hansenia 1306. Hanseniospora 1306. Hansenula 1311. Haplocybe 1157. Haplodothis 537, 1131. Haplopeltis 511, 525. Haplophyse 1120, 1256. Haplosporangium 11. Haplotheciella 634. Haplothecium 537, 631, 1131. Haplostroma 745. Haraea 237, 260. Hariotula 487. Helodiomyces 146. Helotiella 1209. Helotium 1182. Helvella 1155. Henningsomyces 366, 368. Henriquesia 1112. Herpomyces 99. Herpotrichia 977. Herpotrichiella 973.

Herpothrix 1019. Heterochlamis 406. Heterodothis 539. Hexagonia 1328. Holocyphis 1924. Holstiella 767. Homostegia 537, 626. Hormopeltis 581. Hormosphaeria 1300. Humaria 1162: Hyalocurreya 538, 637, 1131. Hyaloderma 230, 232. Hyalodermella 223. Hyalodothis 538. Hyalaevea 680. Hyalosphaera 702. Hyalasterina 435. Hyalotheles 230. Hyaloxylon 726. Hydnangium 1328. Hydnocystis 1148. Hydnotria 1150. Hydnotriopsis 1150. Hydraeomyces 91. Hydrophilomyces 145. Hymenobolus 1231, 1258. Hymenogaster 1327. Hypocapnodium 366, 376. Hypochnus 1324. Hypocrea 667. Hypocrella 692. Hypocreophis 695. Hypocreopsis 674. Hypoderma 1123, 1256. Hypodermella 1257. Hypodermellina 1256. Hypodermopsis 1260. Hypomyces 674. Hyponectria 643. Hypoplegma 252. Hypospila 705, 1076. Hypostegium 807. Hypoxylina 650. Hypoxylon 1079. Hypoxylonopsis 538. Hysterangium 1326. Hysterium 1117. Hysterographium 1120.

Hysteropatella 1119. Hysterostomella 405, 409. Hysterostomina 405, 410. Hysterostroma 405, 412. Hysteropsis 1258.

Ijuhya 666. Ilyomyces 107. Ilytheomyces 125. Inocyclus 404, 416. Irene 623. Isomunkia 394, 395.

Jaraia 32. Julella 1054.

Kalmusia 770. Karschia 1278. Karschiella 1278. Keithia 1263. Keisslerina 1265. Kretzschmaria 1084. Kriegeriella 432. Kusanobotrys 368, 421.

Laboulbenia 152. Laboulbeniopsis 153, 220. Lachmia 1291. Lachnaster 1202. Lachnea 1172. Lachnella 1200. Lachnum 1201, Lagerheima 1276. Lambertella 1207. Lamprospora 1169. Lanomyces 365. Lasiobolus 1220. Lasiobotrys 236, 252. Lasiosphaeria 974. Lasiosphaeris 1018. Lasiosordaria 847. Lasiosordariella 815. Lasiosordariopsis 838. Lasiostemma 248. Lauterbachiella 405. Lecanidion 1287. Leciographa 1290. Lembosia 421, 491.

Lembosiella 421. Lembosina 420, 429, Lembosiodothis 405, 411. Lembosiopsis 421, 440. Lentomita 1071 Leotia 1234. Leptascospora 223. Leptocrea 645. Leptodothiora 1265. Leptodothis 406, 409, Leptomassaria 826. Leptopeltella 1115, 1255. Leptopeltis 393, 394, 1255. Leptophyma 1141. Leptosillia 815. Leptosphaerella 994. Leptosphaeria 979. Leptosporella 1067. Letendrea 677. Leucopezis 1198. Leucostoma 707. Leveilieina 535, 549 Leveillella 534, 549. Leveillula 226. Licopolia 538. Limacinia 367, 368, 382, Limacinula 367, 368, 387 Limacinula 385, Linhartia 1211. Linobolus 1060. Linocarpon 1078. Linospora 1061. Linotexis 230, 235. Lisea 676. Lizonia 368. Lizoniella 369. Lopadostoma 746. Lophidiopsis 1337. Lophiodermellina 1257. Lophionema 1111. Lophiostoma 1108. Lophiotrema 1106. Lophium 1128. Lophodermella 1112. Lophodermina 1256. Lophodermium 1124, 1258. Loranthomyces 507, 539. Lulworthia 1059.

Macroderma 1257. Macrodiaporthe 747. Maireella Syd. 238. Malmeomyces 389. Mamiania 705, 1070. Mamianiella 705. Manilaea 1213. Marchalia 406. Massalongella 775. Massaria 1005. Massarina 962. Massarinula 912. Maublancia 487. Maurodothella 497. Maurodothis 404. Mazzantia 539, 705. Medusomyces 1314. Megalonectria 689. Melanconiella 762. Melanconis 746. Melanoclamys 394, 401. Melanomma 1008, 1335. Melanomyces 918. Melanoplaca 406, 414. Melanopsamma 919, Melanopsamella 922. Melanopsammopsis 919. Melanospora 647. Melaspilea 1282. Meliola 237, 263, 421. Meliolina 237, 360. Meliolinopsis 362. Meliolopsis 237. Melittosporiella 1251. Melogramma 1015. Melomastia 969. Mendogia 404, 418. Menezesia 1321. Meringosphaeria 1068. Merismatium 1040. Merodontis 1214. Merostictis 1249. Merrilliopeltis 538, 1116. Metacapnodium 367. Metameris 535, 551. Metasphaeria 951. Microascus 838. Microascus 1143.

Microcyclella 354, 544. Microcyclus 584, 544. Microdiscus 1143. Microdothella 638. Microglossum 1156. Micromastia 237. Micronectria 691. Micropeltella 511, 519. Micropeltis 511, 518. Microphima 1138. Microphiodothis 629. Microscypha 1206. Microthyriella 511, 526, 1255. Microthyriolum 435, 441. Microthyrium 485. Mimeomyces 95. Misgomyces 144, 153. Mitochytridium 20. Mjyakeamyces 681. Molleriella 1189. Mollisia 1191. Mollisiopsis 1194. Monascostroma 1131, Monascus 1319. Monographos 539. Monoicomyces 92. Monopus 538, 634. Monorhiza 404, 415. Monorhizina 404, 415. Monospora 1315. Monosporella 1315. Montagnella 538, 636, 637, 638, 1131. Montagnellina 537, 631, 1131. Montagnina 539. Morchella 1154. Morenoella 421, 498. Morenoina 420, 430, 502. Mortierella 12. Moutoniella 1258. Mucor 1. Mulleriella 816. Munkiella 394, 395. Munkiodothis 535, 609, Mycobacidia 1292. Mycoderma 1310. Mycogala Rost. 237. Mycolangloisia 507. Mycosphaerella 849-850, etc., 892.

Mycrobilimbia 1288. Mycrothyrium 420, 423. Mycrotyle 367, 370. Myelosperma 815. Mylocoprella 532. Mylocopron 420, 421. Myriangium 538, 1136. Myriapodophila 218. Myridium 1238. Myriella 1238. Myrmaecium 759. Myxasterina 421. Myxodiscus 539; Myxomyriangium 1138. Myxophacidiella 1260. Myxophacidium 1260.

Myzothecium 237. Nadsonia 1311. Naetrocymbe 388, 389. Naevia 1245, 1258. Naeviella 1248. Nectaromyces 1311. Nectria 651. Nectriella 640-641. Nectriopsis 676. Nemacyclus 1253. Nematospora 1314. Nematostigma 973. Nematostoma 972. Nematothecium 390, 392. Neohenningsia 665. Neohoehnelia 368, 375. Neokeissleria 747. Neonectria 665. Neopeckia 943. Neorehmia v. Höhn, 238. Neotrotteria 777. Neoventuria 1005. Nesolechia 1273. Niesslella 533. Niptera 1209. Nitschkea 775. Nostocotheca 230. Nothodiscus 1264.

Nummularia 1086.

Nycteromyces 85.

Nymanomyces 1257.

Ocellaria 1244. Odontia 1323. Odontoschizon 1272. Odontotrema 1251, 1259. Odontura 1251. Ohleria 1013. Oligostroma 537, 615. Olpidiaster 1331. Olpidiopsis 16. Olpidium 15. Ombrophila 1235. Omphalospora 536, 609. Onygena 1145. Oomyces 691. Opasterinella 436, 487. Opeasterina 435. Opethyrium 435. Ophiobolus 1062. Ophiocapnodium 366, 388. Ophiocarpella 538, 638, 1131. Ophiochaeta 1077. Ophiodothella 537, 629. Ophiodothis 698. Ophiodothis 539. Ophiognomonia 707. Ophiomeliola 238, 263, 366. Ophionectria 689. Ophiopeltis 421. Ophiotextis 230, 235. Orbicula 237. Orbilia 1238. Orcadia 678. Otidea 1161. Otthia 946. Otthiella 922. Oxydothis 538, 915.

Pachypatella 1278.
Pachyrhytisma 1259.
Palawania 406, 414.
Pampolysporium 236.
Paracapnodium 366, 367.
Parahydraeomyces 91.
Paranectria 684.
Paranthostomella 825.
Parapeltella 503.
Parasterina 421, 478.
Parenglerula 230, 235.

Parmularia 404.

Parmulariella 101.

Parmulina 403, 415.

Parodiella 238, 250.

Parodiellina 389.

Parodiopsis 237, 390, 391.

Paropsis 223.

Patellaria 1286.

Patellea 1277.

Patellonectria 1339.

Patinella 1272.

Patouillardina 505.

Paurocotylis 1320.

Peltella 420, 423.

Pemphidium 421.

Pericystis 10, 1331.

Perischizon 531, 548.

Perisporiella P. Henn. 238.

Perisporina 237, 263, 390.

Perisporiopsis 261, 366, 369, 375.

Perisporium 261.

Peristomialis 1194.

Peristomium 229.

Peroneutypa 707, 728.

Peroneutypella 730.

Peronoplasmopara 63, 1333.

Peronospora 38.

Perrotiella 1209.

Peyerimhoffiella 208.

Peyritschiella 87.

Pezicula 1194.

Peziza 1160.

Pezizella 1186.

Pezizellaster 1190.

Pezoloma 1194.

Phacidiella 1261.

Phacidina 1255.

Phacidiostroma 1259.

Phacidium 1258, 1260.

Phacopsis 1294.

Phaeangella 1232.

Phaeangium 1230.

Phaeochora 536, 609.

mi de distriction de distriction de la constant de

Phaeochorella 536, 609.

Phaeodothiopsis 617.

Phaeocryptopus 259. Phaeodiaporthe 768.

Phaeodimeriella 237, 257,

Phaeodimeriella 237,

Phaeodothiopsis 536.

Phaeodothis 587, 618.

Phaeopeltis 368, 385.

Phaeopezia 1206.

Phaeophacidium 1258, 1263.

Phaeosaccardinula 385, 389, 421,

Phaeoschiffnerula 230, 233.

Phaeoscutella 530.

Phaeosperma 765.

Phaeospora 1003.

Phaeosphaeria 994, 995.

Phaeotrabutiella 585,609.

Phaeotrype 849.

Phaeosphaerella 925.

Phaneroascus 1146.

Phanerococcus 1132.

Pharcidia 893.

Phialea 1184.

Philocopra 817.

Fhilonectria 1016.

Phoma 707.

Phomatospora 794.

Phragmocapnias 368, 385.

Phragmocarpella 537, 621.

Phragmocauma 536, 620.

Phragmodothella 535, 551.

Phragmodothis 535, 551.

Phragmonaevia 1249.

Phragmosperma 1131.

Phragmothyriella 512, 528, 1255.

Phragmothyrium 420, 430,

Phycomyces 9.

Phylacia 1085.

Phyllachora 537, 565, 624, 628, 1333.

Phyllachorella 537, 607.

Phymatodiscus 1139.

Physalospora 795, 1334.

Physalosporina 645.

Physoderma 20.

Phytophthora 34, 1332.

Pichia 1312.

Piersonia 1151.

Pilgeriella 366, 539.

Piline 236.

Pilobolus 11.

Pilocratera 1172.

Piptostoma 421

Pirottea 1200. Pithyella 1168. Placoasterella 405, 412. Placostroma 536, 610. Placuntium 1259. Plagiostoma 706. Plagiostomella 705, 914. Plasmopara 64. Platystomum 1110. Plectodiscella 1110. Pleiostomella 406, 418. Plenophysa 1320. Pleodothis 538, 543. Pleoglonis 1113. Pleomassaria 1045. Pleomeliola Sacc. 238, Pleomerium 223. Pleonectria 688. Pleophragmia 1055. Pleoscutula 1285. Pleosphaeria 1052. Pleosphaerulina 1019. Pleospora 1024. Pleostictis 1260. Pleotrachelus 14. Pleuroceras 706. Plochmopeltis 512, 529. Plowrightia 542. Plowrightia 545. Plowrightiella 538, 548. Pocosphaeria 1003. Podaleuris 1208. Podobelonium 1215. Podocapsium 1146. Podocrea 673. Podosphaera 223. Polhysterium 1122. Polychaeton 383. Polyclypeolum 512, 527, 1255. Polycyclina 404, 408. Polycyclus 404, 416. Polyporus 1322. Polyrhizon 405, 412. Polystictus 1322. Polysporidium 236. Polystomella 405, 407.

Poronia 1094.

Porostigme 948.

Prillieuxina 486. Propolidium 1248. Propoliopsis 1250. Propolis 1244. Protascus 15. Protascus 15. Protomyces 1315. Protomycopsis 1317. Protothyrium 427. Protoventuria 938. Pselaphidomyces 208. Pseudohelotium 1191. Pseudolembosia 394, 403. Pseudolizonia 368. Pseudomeliola 366, 388. Pseudonectria 640. Pseudoparodia 1144. Pseudoperonospora 63. Pseudopeziza 1262. Pseudophacidium 1198, 1256, 1272. Pseudophyllachora 1004. Pseudoplea 1131. Pseudopleospora 1132. Pseudosaccharomyces 1307. Pseudosphaerella 537, 631, 1131. Pseudothis 766. Pseudotrochyla 1257. Pseudovalsa 1016. Puccinia 1329. Puiggariella 421. Puiggarina 608. Puttemansiella 838. Pycnocarpon 508, 509. Pycnoderma 420, 433. Pycnopeltis 420, 431. Pyreniella 807, 1131. Pyrenobotrys 538, 635. Pyrenopeziza 1195. Pyrenopezizopsis 1198. Pyrenophora 1041. Pyrenopolyporus 1092. Pyronema 1162. Pythiogeton 1332. Pythiopsis 23. Pythium 28, 1331.

Quaternaria 710. Ouestieria 478.

Scelophoromyces 215.

Ramosiella 1143. Ramularisphaerella 849. Ravenelula 1282. Rehmiella 706, 1074. Rehmiodothis 536, 610. Rabdostroma 913. Rachomyces 209. Rhagadolobium 405, 1264. Rhamphoria 1077. Rheosporangium 31. Rhiphidonema 1325. Rhipidium 29. Rhipidocarpon 404, 415. Rhizina 1159. Rhizogene 365. Rhizomyces 136. Rhizophidium 19. Rhizopus 7. Rhizotexis 230, 235. Rhopographella 622. Rhopographina 536, 625. Rhopographus 536, 625. Rhymbocarpus 1276. Rhynchomelas 650. Rhynchomeliola 366. Rhynchosphaeria 1077. Rhynchostoma 1074. Rhytisma 1256, 1265. Rickia 74. Rizalia 237, 364. Rosellinia 826. Rosenscheldia 538, 638. Rosenscheldiella 538, 634. Rostronitschkea 776. Roumegueria 539. Roussoella 539.

Saccardinula 421, 532. Saccardoella 963. Saccardomyces 238. Saccharomyces 1304. Saccobolus 1223. Saprolegnia 23, 1331. Sarcosoma 1234. Sarcoscypha 1172. Sarcoxylon 1085. Scaphidiomyces 210.

Schenckiella P. Henn. 238. Schiffnerula 230. Schizochora 536, 565. Schizostoma 1106. Schizothyrioma 1112, 1256. Schizothyrium 511, 527, 1255. Schizoxylon 1253. Scirrhiachora 1131. Scieroderris 1233. Scieropleella 1131. Scierospora 65. Scierotinia 1177. Schneepia 404. Scutula 1284. Schweinitziella 534. Scirrhia 536, 611. Scirrhiachora 538, 634. Scirrhiella 538. Scirrhodothis 536, 611. Scirrhophragma 536, 621. Scolecodothis 536, 630. Scolecopeltis 511, 524. Scolionema 405, 411. Scoptria 707. Scorias 367, 376. Scutellum 420, 431. Semphostroma Starb, 238. Secotium 1326. Septobasidium 1325. Septochora 638. Septomazzantia 665. Septorisphaerella 849. Setella 368, 384. Seuratia 369. Seynesia 420, 427, 435. Seynesiella 502. Seynesiola 435. Sillia 774. Sintexis 230, 234. Sordaria 844. Sorica 368. Sorolpidium 17. Sphaeranthostoma 741. Sphaerella 849, 1834. Sphaeria 1068. Sphaeroderma 650. Sphaerodes 650.

Sphaerodothis 587. Sphaerognomonia 705. Sphaeropezia 1259. Sphaerosoma 1159. Sphaerostilbe 666. Sphaerotheca 1333. Sphaerulina 948. Sphaleromyces 138. Spilopezis 1199 Sporomega 1260. Sporormia 1015. Spragneola 1156. Stalagmites 538, 636. Starbaeckiella 1018. Stegasphaeria 937. Stegastroma 936. Stephanomyces 128. Stephanotheca 420, 432. Stereocrea 684. Stereolachnea 1177. Stevensea 261. Stevensiella 808. Stichomyces 186. Stictis 1251. Stigeosporium 38 Stigmatea 393, 595. Stigmatodothis 393, 400. Stigmatomyces 108. Stigmochora 537, 612. Stomatogene 236. Stomiopeltella 512, 529, Stomiopeltis 512, 529. Sydowia 964. Symphaeophyma 616. Synandromyces 107. Synaptomyces 149. Syncarpella 538, 639. Synchytrium 17. Sympeltis 406, 409. Symphaster 420, 490.

Tapesia 1199.
Taphrina 1301, 1340.
Tassiella 830, 834.
Teichospora 1047.
Teichosporella 1022.
Telephora 1324.

Systremma 535, 548.

Telimena 537, 623, Tephrosticta 1023. Tephrosticta 368, 385. Teratomyces 127. Teratonema 237, 241, Teratosphaeria 538, 635, Tetrandromyces 101. Tettigomyces 86. Thallochaete 421, 488. Thamnomyces 1103. Thaxteriola 219. Theissenia 1092. Theissenula 230, 231. Thelebolus 1218. Therrya 1260. Thrauste 230, 234. Thripomyces 151. Thyridaria 768. Thyridium 771. Thyriopsis 536, 617, 1255. Titanella 1046. Torrendiella 1205. Torrubiella 691. Torulopsis 1304. Trabutia 535, 554, 609, 610, 616, 1321. Trabutiella 585, 559, 609. Trailia 690. Trematosphaeria 1011. Trenomyces 128. Treubiomyces 368, 389. Trichaleurina 1207. Trichasterina 477. Trichaleuris 1207. Trichobelonium 1215. Trichochora 535, 553. Trichodothis 584, 548. Trichomerium 223. Trichonectria 690. Trichopeltella 508. Trichopeltina 508. Trichopeltis 508. Trichopeltopsis 421. Trichopeltula 508. Trichospermella 364. Trichosphaerella 810. Trichosphaeria 808. Trichothecium 927.

Trichothyriella 507.

Trichothyriopsis 507.
Trichothyrium 421, 506.
Trochila 1262.
Tromera 1276.
Tryblidaria 1293.
Tryblidiella 1118.
Tryblidis 1113.
Tuber 1151.
Tympanis 1230.
Typhula 1324.
Typhulochaeta 226.
Tyridiomyces 1304.

Uleodothella 545. Uleodothis 535, 544. Uleomyces 1137. Uleopeltis 404, 418. Uncinula 223. Unguicularia 1202. Urophyctis 22. Uropolystigma 644. Urnula 1224. Ustulina 1098, 1335.

Valsa 707, 710.
Valsaria 588, 762.
Valsella 707, 716.
Valseutypella 724.
Valsonectria 667.
Venturia 421, 897.
Venturiella 1005.
Verpa 1155.
Vialaea 766.
Vittadinula 650.

Vizelia 898, 402, 1021, 1256.

Wageria 259.
Wallrothiella 808.
Wardina 476.
Willia 1311.
Winteria 969.
Winterina 706, 969.
Winteromyces 237, 250.
Wolkia 15.
Woroninella 17.

Xenosphaeria 1001. Xylaria 1095. Xylobotryum 1294. Xyloglyphis 1250. Xylogramma 1250. Xyloma 1257. Xylopezia 1260. Xystozukalia 382, 389.

Jatesula 421, 505. Joshinagella 584, 550.

Zeugandromyces 130.
Zignoella 965.
Zimmermaniella 585.
Zoophagus 82.
Zopfia 250.
Zukalia 368, 879, 389.
Zukalia 378.
Zygorrhynchus 10.
Zygosaccharomyces 1318.
Zukaliopsis 367, 369, 1188.

## INDEX ALPHABETICUS

## specierum in volumine XXIV descriptarum

additis synonymis (cursive impressis)

abbreviatus (Cantharomyces) 97. Abchaziae (Cenangium) 1229. abellinensis (Cephalotheca) 228, abellinensis (Protomyces) 1337. aberrans (Apiospora) 915. aberrans (Apiosporella) 915. aberrans (Teichospora) 1051. abietinum (Phaeophacidium) 1263 Abietis (Diatrypella) 742. Abietis (Phaeocryptopus) 259. Abietis (Polyclypeolum) 527,1255 Abietis (Rehmiellopsis) 893. Abietis (Sphaerella) 858. abnormis (Diaporthe) 748. abnormis (Pilocratera) 1173. abortiva (Metasphaeria) 952. abrupta (Meliola) 303. abscondita (Dictyochorella) 629. abundans (Metasphaeria) 953. abundans (Mucor) 5. abyssalis (Laboulbenia) 165. Acaciae (Catacauma) 560. Acalyphae (Meliola) 285. Acalyphae (Micropeltis) 516. Acalyphae (Plasmopara) 64. Acalyphae (Physotheca) 64. Acanthopanacis (Sphaerella) 890 acanthophila (Didymella) 901.

Acanthophylli (Cucurbitaria) 1056 accedens (Phyllachora) 589. acerina (Gibberella 686. acerinum, (Hysterographium) 1120 acerinum (Rhytisma) 1256, 1266. acerinum (Schizothyrium) 1255. Aceris (Exoascus) 1300. Aceris Laurini (Rhytisma) 1257. Aceris (Phaeosphaerella) 924. acervata (Mycobilimbia) 1289. acetabularioides (Geopyxis) 1159 Achenii (Laboulbenia) 156. acicola (Ciboria) 1182. aciculosa (Meliola) 351. acicularis (Sphinctrina) 1294. Aciurae (Stigmatomyces) 120. Acokantherae (Dimerosporium) Acokantherae (Hysterostoma) 413. acolioides (Teichosporella) 1022. Acori (Sphaerella) 850. acrensis (Micropeltella) 522. Actinidae (Sphaerella) 860. Actinidiae (Uncinula) 224. aculeiferus (Chitonomyces) 88. acuminatus (Coreomyces) 150. acuminatus (Tettigomyces) 87.

Acupalpi (Laboulbenia) 207. acuum (Cenangium) 1229. acutata (Didymella) 908. acutiseta (Meliola) 299. adeana (Guignardia) 791. adeanum (Platystomum) 1110. adelphica (Peroneutypella) 731. Adenocalymmatis (Dothidella) 544.

Adenostylis (Lachnum) 1201. Adianthi (Physalospora) 797. aecidioides (Synchytrium) 17. aecidioides (Uredo) 17. aecidioides (Woroninella) 17. Aegopodii (Plasmopara) 65. Aegopodii (Protomyces) 1317 aemulans (Ohleria) 1013. aequalis (Micropeltis) 516. aequalis (Oxydothis) 915. aequatoriensis (Phyllachora) 602. aerophilum (Platystomum) 1110. aeruginascens (Micropeltis) 519. aethiops (Meliola) 302. affinis (Balladyna) 374. affinis (Meliola) 315. affinis (Monoicomyces) 92. affinis (Phyllachora) 591, 592. affinis (Physalospora) 805. affinis (Rosellinia) 830. affinis (Stigmatomyces) 117. affinis (Thrauste) 234. afra (Laboulbenia) 180. africana (Camillea) 1094. africana (Rosellinia) 833. africana (Meliola) 332. africanum (Bulgariastrum) 1242. africanus (Pseudosaccharomyces) 1307.

Afzeliae (Phyllachora) 589. Agathidii (Ecteinomyces) 140. agavectona (Dimerosporium) 242. Agaves (Cucurbitaria) 1055. Agaves (Diplodia) 1055. Agaves (Hymenobolus) 1231,

1250.

'Agaves (Leptosphaeria) 979. Agaves (Phytophthora) 35.

Agavis (Sphaerella) 849. aggregata (Antennularia) 1137. aggregata (Byssonectria) 644. Aglaiae (Meliola) 316. Agrae (Laboulbenia) 178. agrestis (Peronospora) 61. agrorum (Peronospora) 57. agusanensis (Micropeltella) 520. aibonitensis (Meliola) 354 Ailanthi (Chorostate) 748. Ailanthi (Guignardia) 791. Ailanthi (Laestadia) 791. Ajrekari (Phyllachora) 566. alabatensis (Nummularia) 1090. alang-alang (Caenothyrium) 431. Alangii (Eutypa) 725. Alangii (Meliola) 281. alarium (Chytridium) 20. Albersii (Lembosia) 412 albicans (Guignardia) 779. albicans (Nectria) 664. albido-maculans (Mollisia) 1192. albo - marginatum (Dimerosporium) 244. albido - mucosa (Eriosphaeria) 921.

albinus (Ascobolus) 1222. Albizziae (Diatrype) 738. Albizziae (Endodothella) 614. Albizziae (Homostegia) 621. Albizziae (Nectria) 651. albofulta (Nectria) 662. albo-grisea (Lachnea) 1174. albolutea (Dasypezis) 1206. albolutea (Trichopeziza) 1206. albo-maculata (Xylaria) 1098. Alchemillae (Rosellinia) 833. alcoholophila (Pichia) 1313. Aleuritis (Lophodermium) 1125. Alexii (Trematosphaeria) 1012. algaphila (Zignoella) 964. algerina (Laboulbenia) 194. Alhagii (Guignardia) 785. Alibertiae (Bagnisiella) 1134. Aliculariae (Coleroa) 398

aliena (Meliola) 355.

aliena (Phyllachora) 596.

aliena (Sphaerella) 857. Alliariae - Wasabi (Peronospora) 42. Allii (Phytophthora) 36. Allioniae (Sphaerella) 880. alnea (Gnomonina) 708. Alni (Gnomonia) 1072. Alni (Sphaerulina) 948. alnicola (Cenangium) 1228. alnicola (Cryptospora) 774. alnicola (Melanconis) 746. alnicola (Mollisia) 1191. alnicola (Valsa) 710. Alnobetulae (Gnomoniella) 1069. Alnobetulae (Sphaerella) 853. Alocasiae (Sphaerella) 850. Alpataci (Teichospora) 1049. alpestre (Synchytrium) 18. alpestris (Laboulbenia) 163. alpestris (Peronospora) 42. alpicola (Peronospora) 57. alpina (Mortierella) 12. alpina (Rehmiella) 708. alpina (Sphaeropezia) 1259. alpincola (Lophiostoma) 1109. alpinum, (Lophodermium) 1126. alpinus (Rhizopus) 7. Alsodejae (Mycrothyrium) 426. Alsophilae (Hysterostomella) 1278 Alsophilae (Pachypatella) 1278. Alstoniae (Seynesia) 427. altera (Sphaerella) 860. alvei (Pericystis) 10. Alyssi calycini (Peronospora) 42. Alyssi incani (Peronospora) 42. Alyxiae (Montagnella) 636. Amauroderae (Monoicomyces) 94 amazonica (Asterinella) 483. amazonica (Baliadynella) 374. amazonica (Elsinoë) 1140. ambiens (Euryachora) 609. ambiens (Hypocrella) 694. ambiens (Leptosphaeria) 994 ambiens (Omphalospora) 609. ambiens (Peroneutypella) 732. ambiens (Rosellinia) 833. ambiens (Valsa) 708, 710.

ambigua (Calonectria) 682. ambigua (Clypeosphaeria) 1008. ambigua (Hypocrea) 670 ambigua (Hypospila) 1076. ambigua (Lasiosphaeria) 847. ambigua (Phyllachora) 600. ambigua (Trabutia) 600. ambiguus (Stigmatomyces) 123. ambrosiaecola (Metasphaeria) 953. amenti (Haplothecium) 631. amenti (Phyllachora) 631. americana (Didymosphaeria) 928. americana (Peronospora) 57. americana (Uncinula) 224. americanus (Microdiscus) 1143. ametableta (Achorella) 548. ametableta (Dothidella) 548. amomicola (Meliola) 353. Amoorae (Meliola) 316. amphitrica (Meliola) 268. amplum (Lophodermium) 1125. ampullare (Chaetomium) 842. anaceros (Autoicomyces) 146. Anamirtae (Asterinella) 482. anceps (Chorostate) 748. anceps (Hysterium) 1117. anceps (Meliola) 336. anceps (Neopeckia) 946. anceps (Nummularia) 1087. Anchonii (Pleosphaeria) 1052. ancipitella (Sphaerella) 869. Ancylopi (Rickia) 83. Ancyrophori (Cantharomyces) 95 andeana (Didymella) 909. andicola (Corethromyces) 130. andicola (Dasysphaeria) 1022. andicola (Eutypella) 723. andicola (Hysterium) 1117. andicola (Hysterographium) 1120 andicola (Karschia) 1278. andicola (Lophiotrema) 1108. andicola (Mycosphaerella) 893. andicola (Physalospora) 797. andicola (Platystomum) 1110. andicola (Pyrenopeziza) 1197. andicola (Thyridium) 772.

andicola (Venturia) 897. andina (Coelosphaeria) 775. andina (Gibberidea) 1017. andina (Laboulbenia) 158. andina (Leptosporella) 1067. andina (Melanopsamma) 919. andina (Patellaria) 1287. andina (Pleomassaria) 1045. andina (Stictis) 1252. andinum (Blitrydium) 1293. andinum (Lecanidion) 1287. andinum (Myrlangium) 1136. andinus (Cantharomyces) 97. andinus (Polycyclus) 416. andinus (Sphaleromyces) 138. Andirae (Meliola) 300. Andirae (Physalospora) 800. Andrewsii (Sphaerella) 855. Andromedae (Lembosiopsis) 440. Andromedae (Placuntium) 1259. andropogonicola (Phyllachora) 574 Andropogonis (Balansia) 697. Andropogonis (Phyllachora) 573. Androssowii (Eutypella) 718. Andryalae (Sphaerella) 856. andurnensis (Rosellinia) 827. Angelicae (Plasmopara) 65. Angelicae (Sphaerella) 890. anguifera (Laboulbenia) 162. angularis (Dioicomyces) 105. angularis (Trichosphaeria) 809. angustispora (Phyllachora) 600. angustum (Chaetomium) 843. anisocarpa (Morenoëlla) 499. Anisodactyli (Laboulbenia) 196. anisodactylicola (Laboulbenia)194 Anisolabis (Dimeromyces) 68. anisomera (Didymosphaeria) 930. anisomera (Irene) 359. anisopleura (Peyritschiella) 88. aniso leurus (Dichomyces) 88. Anisopterae (Asterina) 450. Anisopterae (Morenoëlla) 499. annamensis (Rhizopus) 9. annulata (Dimeriella) 247. annullata (Geopora) 1149.

annullata (Nummularia) 1087 annuliforme (Microthyrium) 423. annuliforme (Schizothyrium) 527. anomala (Apioporthe) 707 anomala (Diatrype) 751. anomala (Hansenula) 1311. anomala (Melanospora) 648. anomala (Meliola) 352 anomala (Phialea) 1185. anemalus (Hytheomyces) 127. Anonae (Eutypella) 716 Anonae (Ophiobolus) 1062. Anonae (Pocosphaeria) 1003. Anoplischii (Stigmatomyces) 120. antarctica (Laboulbenia) 157. antarctica (Morenoëlla) 502. antarctica (Morenoina) 502. Antarctiae (Laboulbenia) 201. Anthephorae (Phyllachora) 574. Anthici (Dioicomyces) 101. anthicicola (Dioicomyces) 102. Anthistiriae (Phyllachora) 574. Anthurii (Glomerella) 793. Anthurii (Sphaerella) 850. anthracodes (Nummularia) 1089. Antillarum (Pseudosaccharomyces) 1309. Antirrhini (Leptosphaeria) 991. Antoniae (Nothodiscus) 1264. anulata (Lamprospora) 1170. anziana (Karschia) 1282. Aparines (Peronospora) 58. apayaoensis (Meliola) 289. Aphaenopsis (Rhachomyces) 209. aphanes (Pezizella) 1190. Aphanes (Polystomella) 545. Aphanes (Uleodothella) 545. Aphanes (Uleodothis) 545. aphanidermatus (Rheosporangium) 31. aphthosae (Epicymatia) 897. apiahyana (Didymella) 905. apiahyana (Rosellinia) 836. apiahyna (Gilletiella) 417. apiahyna (Guignardia) 779. apiahynum (Calothyriolum) 441. apiahynum (Microthyriolum) 441.

apiculatus (Saccharomyces) 1306. 1307. apiculifera (Rickia) 81. apiophila (Mollisia) 1192. apiospora (Peronospora) 58. apiosporoides (Didymella) 907. Apis (Pericystis) 1331. appendiculata (Pleonectria) 688. appendiculatus (Ascophanus) 1219. appendiculatus (Corethromyces) 130. appendiculosa (Asterina) 1021. appendiculosa (Vizella) 1021. applanata (Micropeltis) 517. applanata (Micropeltis) 519. applanata (Schizostoma) 1105. appressus (Dimeromyces) 69. apocrypta (Melanconis) 748. apoense (Catacauma) 562. apoensis (Phyllachora) 562. Apuleiae (Phaeodothis) 619. Apuleiae (Phyllachora) 590. Apulejae (Seynesia) 429. apus (Clypeolella) 488. apus (Clypeolina) 488. aquatica (Amphisphaeria) 921. aquatica (Cudoniella) 1157. aquatica (Haplocybe) 1157. aquatica (Melanopsamma) 920. aquatica (Peronospora) 61. aquatilis (Ceratomyces) 149. aquehongensis (Aleurina) 1207. aguila (Rosellinia) 834. Arabidis - alpinae (Peronospora) Arabidis - glabrae (Peronospora) 43. Arabidis - hirsutae (Peronospora) Arabidis-oxyphyllae (Peronospora) 43. Arabidis - turritae (Peronospora) Arabidopsidis (Peronospora) 44. arachnoidea (Rickia) 77.

Araliae (Pyrenopeziza) 1196.

araneo - cinctus (Cryptodiscus) 1249. araneosa (Lasiosphaeria) 976. araneosa (Meliola) 342. Araucariae (Guignardia) 781. arborescens (Meliola) 361. arborescens (Meliolina) 361. arbuscula (Allomyces) 32. Arctostaphyli (Coccomyces) 1268 Arctostaphyli (Lophodermium) 1125. Arctostaphyli (Nemacyclus) 1254. Arctostaphyli (Stictis) 1254. arcuata (Meliola) 311. arcuata (Rosellinia) 834. Arduinae (Dothidea) 549. Arduinae (Lercillina) 549. Arecae (Anthostomella) 820. Arecae (Guignardia) 790. Arecae (Peroneutypella) 731. Arecae (Physalospora) 803. Arecae (Phytophthora) 35. arecibensis (Meliola) 285. arenaria (Poronia) 1094. arenatus (Stigmatomyces) 112. Arengae (Amphisphaeria) 941. Arengae (Guignardia) 790. Arengae (Propoliopsis) 1250. Arengae (Trichosphaeria) 899. Arengae (Zignoella) 965. areolata (Lamprospora) 1171. areolata (Rosellinia) 828. argenteum (Tuber) 1151. argentinensis (Chitonomyces) 90. argentinensis (Clematomyces) 210 argentinensis (Cochlylomyces) 211. argentinensis (Coreomyces) 150. argentinensis (Dichomyces) 87. argentinensis (Dimorphomyces) argentinensis (Ecteinomyces) 141. argentinensis (Lumonoicomyces) argentinensis (Myriapodophila) argentinensis (Neoventuria) 1005

árgentinensis (Rickia) 74. argentinensis (Sordaria) 844. argentinensis (Venturiella) 1005. argentinus (Ceratomyces) 150. argentinus (Corethromyces) 131. argentinus (Rhachomyces) 209. Argutoris (Laboulbenia) 155. Argyrophylli (Sphaerella) 872. argyropotamica (Laboulbenia) 192 arietina (Laboulbenia) 159. aristata (Xylaria) 1103. Aristolochiae (Sphaerella) 852. armata (Laboulbenia) 164. armatus (Corethromyces) 136. aromaticus (Mucor) 5. Arnoldii (Protomycopsis) 1318. arophilus (Stigmatomyces) 121. Arrhenateri (Leptosphaeria) 995. Arsenii (Pleoscutula) 1285. Artemisiae (Nematostoma) 972. arthraxonicola (Sphaerella) 855. arthrophyma (Gibberidea) 1017. arthrostylidicola (Dimeriopsis) 260. Artocarpi (Meliola) 322. Arunci (Anthostomella) 824. arundinaceum (Lophodermium) 1126, 1258. Arvaticae (Leptosphaeria) arvensis (Peronospora) 61. ascoboloides (Lamprospora) 1169. Ascophylli (Orcadia) 678. Ascophylli (Trailia) 690. Asparagi (Mel. nospora) 647. asparagina (Gnomoniella) 1070. asparagina (Metasphaeria) 955. aspera (Uncinula) 225. asperata (Balansia) 697. asperata (Laboulbenia) 169. asperata (Montagnella) 551. asperata (Phragmodothis) 551. asperata (Rosellinia) 836. aspersa (Asterina) 529. aspersa (Stomiopeltis) 529. asperula (Laboulbenia) 171 asperulina (Pleospora) 1038. Aspiciliae (Bacidia) 1065

Aspidoglossae (Laboulbania) 180 Asplundii (Saprolegnia) 24. assimilis (Phyllachora) 573. Assiminae (Tryblidiella) 1118. associata (Leptosphaeria) 984. asteriscus (Melanographa) 1283, asteriscus (Melaspilea) 1283. asterophora (Achlya) 25. asterophora (Parmulina) 415. Astragali (Physalospora) 800. astragalina (Pleosphaeria) 1053. astrantica (Laboulbenia) 172. Astrocaryae (Camarotella) 620. Astrocaryae (Montagnella) 620. Astrocarvi (Physalospora) 804. Astroniae (Asterina) 458. asymmetricus (Stigmatomyces) 108. aterrima (Botryosphaeria) 813. aterrima (Melanopsamma) 813. aterrima (Pirottaea) 1200. atra (Rhizina) 1159. atractina (Physalospora) 802. atramentaria (Rhytisma) 409. atramentaria (Leptodothis) 409 Atraphaxidis (Cucurbitaria) 1056 atrata (Mollisia) 1191. atratum (Hysterangium) 1326. atratui (Lecanidion) 1288. atrides (Englerulaster) 490. atroareolatum, (Clypeolum) 1255. atrocyanea (Durella) 1251. atrocyanea (Dictyothyrina) 512. atrocyanea (Sticlis) 1251. atrofigurans (Phyllachora) 578. atroingulnans (Massaria) 1006. atro-maculans (Phyllachora) 565. atronitens (Anthostomella) 818. atronitens (Phyllachora) 578. Atropae (Sphaerella) 887. atropurpureus (Teratomyces) 127. (Mycobilimbia) atrosanguinea 1288. atro-testaceum (Uropolystigma) 644.

atrovirens (Cryptodiscus) 1248.

Aspiciliae (Ophiobolus) 1065.

atro-virens (Propolidium) 1248. atrum (Apiosporium) 238. Aucubae (Sphaerulina) 948. Aucupariae (Diaporthe) 750. Auerswaldi (Valsa) 713. augusta (Laboulbenia) 198. Aulecophorae (Dimeromyces) 69. aulographoides (Lembosina) 429. aurantia (Lachnea) 1176. aurantia (Sepultaria) 1176. aurantiaca (Niesslella) 533. aurantiaca (Phialea) 1184. aurantiacum (Belonidium) 533. aurantiacum (Sarcoxylon) 1085. aurantiacum (Synchytrium) 19. aurantiicola (Cryptosporella) 1336 aurantiicola (Melanomma) 1335. aurantiiphila (Didymella) 1334. aurantiiphila (Melanomma) 1335. Aurantiorum (Amylirosa) 1337. aurata (Thyridaria) 770. aurea (Hypocrella) 695. aurea (Sphaerella) 885. aureo-nitens (Hypomyces) 676. aureo-tincta (Niptera) 1217. aureum (Chaetomium) 84 australiensis (Actinomyxa) 533. australis (Coreomyces) 150. australis (Laboulbenia) 157. australis (Lecanidion) 1288. australis (Morenoëlla) 502. australis (Pleospora) 1039. australis (Rosellinia) 834. australis (Trenomyces) 128. australis (Zeugandromyces) 130. austriaca (Lachnea) 1175. austriacus (Pseudosaccharomyces ) 1307. austro-africana (Albugo) 33. austro-africanus (Cystopus) 33. austro-geaster (Lachnea) 1176. austro-geaster (Sepultaria) 1176. avellanaceum (Lophiostoma) 1108 Avellanae (Exoascus) 1301. Axinotomae (Laboulbenia) 197.

baccharidincola (Echidnodes) 498

baccharidincola (Lembosia) 498. Baccharidis (Diatrype) 736. Baccharidis (Lizzonia) 631. Baccharidis (Pseudosphaerella) 631. bacidiospermum (Celidium) 1297. bacillaris (Xylaria) 1100. Bacocerae (Scaphidiomyces) 210. badia (Nectria) 653. Bahuiniae (Dictythyriella) 524. Bahuiniae (Micropeltis) 524. Bainii (Nectria) 664. Bakeri (Asterina) 465. Bakeri (Botryosphaeria) 814. Bakeri (Eutypella) 720. Bakeri (Hepotrichia) 977. Bakeri (Hysterostomina) 410. Bakeri (Leptophyma) 1141. Bakeri (Meliola) 335. Bakeri (Morenoëlla) 500. Bakeri (Myiocoprella) 532. Bakeri (Phragmo hyriella) 528. Bakeri (Pycnopertis) 431. Bakeri (Scolecopeltis) 525. Bakeri (Telimena) 624. bakeriana (Clypeosphaeria) 1007. bakeriana (Clypeosphaeria) 1018 bakeriana (Cryptospora) 774. bakeriana (Glaziella) 647. bakeriana (Haplopeltis) 526. bakeriana (Hyaloderma) 232. bakeriana (Phyllachora) 591. bakeriana (Rosellinia) 837. bakeriana (Winterina) 970. bakeriana (Ophiochaeta) 1077. bakerianum (Myiocopron) 526. bakerianum (Rhagadolobium) 1264. bakuana (Teichospora) 1048. balanseana (Uleodothis) 544. balanseana (Plowrightia) 544. balcanica (Sphaerella) 874. baldratiana (Pleospora) 1034. baldatrianum (Lecanidion) 1287. balsamicola (Adelopus) 371. balsamicola (Asterina) 371. balsamicola (Dimerosporium) 243

halsamicola (Meliola) 243. balsamicola (Zukalia) 243. hambusacea (Sclerotinia) 1179. Bambusae (Calonectria) 681. Bambusae (Cryptospora) 774. Bambusae (Endodothella) 614. Bambusae (Guignardia) 867. Bambusae (Leptosphaeria) 995. Bambusae (Metachora) 576. Bambusae (Miyakeamyces) 681. Bambusae (Phaeosphaeria) 995. Bambusae (Phyllachora) 576, 577 Bambusae (Physalospora) 614. Bambusae (Scirrhia) 611. Bambusae (Scirrhodothis) 611. Bambusae (Sphaerella) 867. Bambusae-Blumeanae (Hypoxy-Ion) 1080. bambusana (Herpotrichia) 978. Bambusarum (Nitschkea) 775. bambusella (Guignardia) 784. bambusicola (Curreya) 638. bambusicola (Dothidella) 614. bambusicola (Epybotrys) 638. bambusicola (Trichonectria) 690. bambusifolia (Sphaerella) 866 bambusina (Amphisphaeria) 939. bambusina (Eutypella) 719. bambusina (Guignardia) 784. bambusina (Guignardia) 784. bambusina (Manilaea) 1214. bambusina (Mendogia) 418. bambusina (Pseudonectria) 640. bambusina (Sphaerella) 866. bambusina (Üleopeltis) 418. bambusincola (Massarinula) 912. bambusinum (Glonium) 1112. bambusinum (Pycnoderma) 433. banahaensis (Meliola) 317. bananincola (Peziza) 1160. banguinensis (Asterina) 469 banguiensis (Meliola) 321. Banisteriae (Phyllachora) 595. banosensis (Meliola) 307. Barbareae (Peronospora) 44. barbatum (Chaetomidium) 240 Barleriae (Diatrypella) 741.

Barnardi (Hymenogaster) 1327 Barringtoniae (Meliola) 300 Barringtoniae (Physalospora) 799 Bartholomaei (Hypoxylon) 1079 bataanensis (Massaria) 1006. bataanensis (Meliola 306. Bataillei (Ombrophila) 1236 batamensis (Pleospora) 1036 Batatae (Chorostate) 749. Batatatis (Diaporthe) 749. Bauhiniae (Meliola) 301. Baubiniae (Pseudothis) 766 Bauhiniae (Roussoella) 767 Bauhiniarum (Parodiella) 235 Bauhinarum (Rhizotexis' 235. bayamenensis (Meliola) 335. Beckerae - polystachiae (Phyllachora) 577. Beilschmiediae (Morenoëlla) 500. Bellidis (Protomuces) 1318. Bellidis (Protomycopsis) 1318. belonospora (Odontotrema) 1258. bengustensis (Trebutia) 555. Berberidis (Cenangium) 1227. Berberidis (Curreya) 552. Berberidis (Dictyodothis) 552. berengeriana (Botryosphaeria)811 bergiana (Laboulbenia) 185. Bergii (Laboulbenia) 177. Bergi (Microtyle) 372. berkelevanus (Hypomyces) 676. Berkelevi (Nectria) 660. berlesiana (Sphaerella) 864. Bernardi (Zygorrhynchus) 10. Bersamae (Phyllachora) 598. Berteroae (Peronospora) 44. Bertholletiae (Cunninghamella)13 Betae (Sorolpidium) 17. Betheli (Godronia) 1233. Betle (Capnodium) 385. Betle (Phragmocapnias) 385. Betulae (Gloeosporium) 1073. Betulae (Myxophacidiella) 1260. betulina (Gnomonia) 1072. betulina (Sillia) 774. Biatora (Scutula) 1284. bicchiana (Septomazzantia) 666.

bicchianus (Microcyclus) 666. bicincta (Anthostomella) 821. bicolor (Chitonomyces) 93. bicolor (Corethromyces) 131. biconida (Tryblidiella) 1119. bicornis (Autoicomyces) 148. bicornis (Meliola) 304. bicuspidata (Monosporella) 1315. bicuspis (Ciliaria) 1200. bicuspis (Lachnea) 1200. bidentatus (Corethromyces) 131. biennis (Guignardia) 780. biennis (Laestadia) 780. bifida (Rickia) 81. bifoveolata (Metasphaeria) 959. bifrons (Hypospila) 708. bignoniicola (Dimerosporium)242 bilobatus (Cucujomyces) 214. bina (Dicarpella) 743. bina (Physalospora) 743. binum (Disperma) 743. biparasitica (Cryptonectriopsis) 742.

birmanica (Laboulbenia) 173. Bischofiae (Phyllachora) 571. Biscutellae (Peronospora) 45. biseptata (Limacinia) 382. bispora (Piersonia) 1151. bisporale (Haplosporangium) 11 Blanchardi (Laboulbenia) 187. blattina (Amphoromorpha) 217. Blechri (Laboulbenia) 189. Blepharoneuri (Phyllachora) 577. Blumeae (Didymosphaeria) 928. blumeanum (Cenangium) 1229. blumeanum (Exarmidium) 621. blumeanus (Rhopographus) 621. bobanensis (Pleospora) 1034. Boehmeriae (Atlescherina) 734. Boehmeriae (Diaporthe) 755. Boehmeriae (Phaeosperma) 765. Boehmeriae (Thyridium) 772. Boerlagiodendriae (Meliola) 269. Boggiani (Laboulbenia) 205 bogorensis (Laboulbenia) 195. bogoriensis (Micropeltella) 523 bogoriensis (Micropeltis) 523.

bocconeana (Metasphaeria) 957. bohemica (Mycosphaerella) 893. bohemica (Rehmiellopsis) 893. bohemicum (Physoderma) 22. Bolamae (Laboulbenia) 182. bolamensis (Laboulbenia) 181; bolandieri (Cyphelium) 1294. Bolivarii (Lophiotrema) 1108. Bolivarii (Lophodermium) 1127. Bolivarii (Massaria) 1006. boliviensis (Ravenenula) 1282. bolleana (Sphaerella) 879. bomba (Nectria) 656. Bommerae (Onygena) 114 Bomplandi (Cookella) 1144. Bomplandi (Hormopeltis) 531. Bomplandi (Meliola) 343. Bomplandi (Ophiomeliola) 363. bonaerensis (Chantransiopsis) 217 bonamicana (Metasphaeria) 951. bonariensis (Ecteinomyces) 143. bonariensis (Laboulbenia) 157. Boni Henrici (Peronospora) 40. Borbori (Stigmatomyces) 109. borboridinus (Stigmatomyces) 109 Borchii (Tuber) 1153. Bordei (Cantharomyces) 99. Bordei (Dimeromyces) 70. Bordei (Laboulbenia) 194. borealis (Laboulbenia) 172. borealis (Melanopsamma) 921. borealis (Peronospora) 58. borealis (Sclerotinia) 1179. borealis (Sphaerella) 853. borealis (Stigmatomyces) 123. borgiana (Physalospora) 803. borgiana (Pleospora) 803. borgiana (Venturia) 898. Borgii (Didymosphaeria) 933. Bormülleri (Leptosphaeria) 1000. borneensis (Endogonella) 1320. borneensis (Micropeltis) 514. Bosciae (Meliola) 275. botanensis (Pleospora) 1034. bothrina (Rosellinia) 834. botryoides (Mucor) 1. botryosa (Sordaria) 847.

Bottegoi (Laboulbenia) 197. bottnica (Cryptoderis) 1076. botuliformis (Xylaria) 1101. Boudieri (Ascobolus) 1223. Boudieri (Lachnea) 1175. Boudieri (Lachnea) 1175. Boudieri (Trichophaea) 1175. Boudieri (Zopfia) 250. Bourreriae (Phyllachora) 567. Boydii (Orbilia) 1239. brachiatus (Dimeromyces) 69. Brachidae (Tetrandromyces) 101. brachygnatus (Dioicomyces) 102. brachynicola (Laboulbenia) 175. brachyspora (Amphisphaeria) 942 brachyspora (Karschia) 1278. brachyspora (Phyllachora) 572 brachyspora (Ustulina) 1335 brachynema (Apodachlya) 29 Brachyonychi (Laboulbenia) 203. branseanum (Belonium) 1214 brasiliana (Asterina) 447. brasiliensis (Laboulbenia) 164. brasiliensis (Corynelia) 1105. Brassicae (Peronospora) 45. Brassicae (Sordaria) 847. Braunii (Venturia) 900. brenkleana (Bertiella) 638. brenkleana (Diaporthe) 752. brenckleana (Patinella) 1272 brenkleana (Rosenscheldia) 638. brenkleanum (Lophiostoma) 1109 Brencklei (Phaeotrype) 849. bresadoleana (Leptosphaeria) 983 brevicollis (Stigmatomyces) 122. brevis (Tettigomyces) 86. breviseta (Trichosphaeria) 809. Breyniae (Asterina) 452. breyniaecola (Asterina) 452. Brideliae (Sphaerella) 862. briosiana (Gibberella) 687. briosiana (Pleospora) 1025. briosiana (Pleosphaerulina) 1131. briosiana (Pseudoplea) 1131. Brizae (Pyrenophora) 1043. Bromeliacearum (Acrospermum) 1129.

Bromeliacearum (Echidnodes)498 Bromeliae (Perisporium) 261 Bromi (Phyllachora) 584. Bromi (Sphaerella) 866. Bromi (Synchytrium) 18. brotheriana (Montagnella) 637 Browneanum, (Microthyrium) 425 Bruchi (Cantharomyces) 99. Bruchi (Chitonomyces) 89. Bruchi (Sphaleromyces) 138. brunaudiana (Eutypella) 722. Bruni (Didymella) 906. brunnea (Hypocrea) 667. brunneo-ciliata (Lachnella) 1201. brunneolus (Corethromyces) 135. Bryii (Sphaerella) 879. Bryonthae (Didymosphaeria) 931 bubakiana (Pleospora) 1028. Bubaki (Coleroa) 398. Bubakii (Melanomma) 1008. bulbifera (Cubonia) 1220. bullata (Dothidea) 548. bullata (Physalospora) 801. bullata (Stigmatea) 395. Buniadis (Peronospora) 45. burburyanum, (Hysterangium) 1326. Burchelliae (Diplochorella) 632. Burkillii (Sordaria) 845. Burmeisteri (Laboulbenia) Butleri (Balladyna) 373. Butleri (Lasiobotrys) 252. Butleri (Limacinula) 386. Butleri (Meliola) 338. Butleri (Ophiobolus) 1062. Butleri (Phaeosaccardinula) 386. Butleri (Pythium) 1331. Butleri (Trabutia) 557. Büttneriae (Asterina) 473. Byrsonimae (Meliola) 313. byssisedum (Schizostoma) 1106.

Caballeroi (Leptosphaeria) 991. Caballeroi (Ophiobolus) 1064. caballina (Humaria) 1165. Cabelludae (Guignardia) 789. Cabelludae (Laestadia) 789. Cacaliae (Leptosphaeria) 981. cacticola (Phaeospora) 1004. Cactorum (Phytophthora) 35. Cacoti (Embolus) 1294. Cacoti (Mycocalicium) 1294. cadigense (Hypoxylon) 1082. cadigensis (Meliola) 339. Caesalpiniae (Melanomma) 1009. caespiticia (Phyllachora) 575. caespitosa (Henningsina) 1086. caespitosa (Mollisia) 1193. caespitosa (Parodiella) 250. caespitosa (Sphinctrina) 1294. caespitosum (Bulgariastrum) 1241 caespitosum (Xylobotryum) 1294. caespitosus (Oomyces) 691. caespitosus (Winteromyces) 250. caespitulosa (Didymosphaeria) 935. caffra (Phyllachora) 568. caffra (Physalospora) 568. cahirensis (Guignardia) 785. cahirensis (Laestadia) 786. Cainitonis (Nectria) 654. Cajani (Allescherina) 733. Cajani (Guignardia) 783. Cajani (Ophiobolus) 1064. Calami (Agyrona) 1143. Calami (Anthostomella) 821. Calami (Asterinella) 483. Calami (Physalospora) 804. Calami (Ramosiella) 1143. Calami (Yatesula) 505. calamicola (Eremothecella) 529. calamicola (Seynesia) 414. calamicola (Micropeltis) 518. calamincola (Thyridaria) 769. calathicola (Laboulbenia) 185. Calancalli (Zignoella) 965. calcariae (Arthopirenia) 894. calcariae (Pharcidia) 894. Calepinae (Peronospora) 45. californica (Hydnocystis) 1148. californica (Patellaria) 1286. californica (Patellea) 1277. californica (Thyridaria) 768.

Callicarpae (Diaporthe) 751.

Callicarpae (Meliola) 350. Calligoni (Melanomma) 1010. Calliphorae (Pichia) 1312. Callista (Meliola) 351. Callistemoni (Phyllachora) 1333. Callisti (Laboulbenia) 181. callorioides (Naevia) 1245. callosperma (Meliola) 285, callosperma (Meliola) 362... Callunae (Clithris) 1270. Callunae (Colpoma) 1270. Callunae (Niptera) 1209. calocarpa (Anthostomella) 823. calocephala (Xylaria) 1103. calochroa (Orbilia) 1239. Caloderae (Monoicomyces) 94.) calonectricola (Nectria) 656. Calophylli (Meliola) 294. Calopogonii (Elsinoë) 1140. Calopogonii (Meliola) 304. calospora (Herpothrichia) 1019. calospora (Herpothrix) 1019. calotheca (Laboulbenia) 174. calotheca (Peronospora) 58 et 59. calotheca Aparines (Peronospora) 58. Calthae (Physoderma) 21. calycinus (llytheomyces) 126. Calyptranthis (Phyllachora) 599. cambivora (Blepharospora) 28. Cambucae (Guignardia) 789. Cambucae (Laestadia) 789. camarinensis (Asterina) 451. camarinensis (Micropeltella) 521. Camelinae (Peronospora) 45. Camelliae (Asterina) 474. Camelliae (Cryptovalsa) 735. comerunensis (Hypocrella) 692. campestricola (Lecidea) 1295. Campestricola (Phacopsis) 1295. campestris (Pseudopeziza) 1262. campulostyla (Gnomonia) 1072. canadensis (Pleosphaerulina) 1019. canadica (Fenestella) 773. canadica (Naevia) 1245. canafistulae (Phyllachora) 590.

canaliculatum (Tuber) 1153. canariensis (Eutypella) 722. canariensis (Pleospora) 1036. Canarii (Coccomyces) 1267. Canarii (Dothidella) 545. Canarii (Meliola) 274. Canarii (Phullachora) 545. Cancri (Hypomyces) 659. cancri (Nectria) 659. candicans (Hypomyces) 676. cannabina (Leptosphaeria) 998. Cannabidis (Phyllachora) 598. Cannae (Myrmaecium) 759. cantareirensis (Ophiobolus) 1067. cantonensis (Phyllachora) 587. capensis (Artonia) 1293. capensis (Phaeodimeriella) 258. capensis (Tryblidaria) 1293. capillarius (Euzodiomyces) 151. capitata (Scorias) 376. capnodioides (Teichospora) 1051. capnoides (Calvotra) 371. Capparidis (Asterina) 445. Capparidis (Eutypa) 724. Capparidis (Paranthostomella) 825. Capreae (Phoma) 708. capsicicola (Meliola) 345. capucinoides (Helvella) 1153. caracaensis (Dimeriella) 247. Caraganae (Physalospora) 801. carbonacea (Apiospora) 612. carbonicola (Lagerheima) 1277. Cardamines laciniatae (Peronospora) 46. caribbeus (Stigmatomyces) 113. Caricae (Asperisporium) 855. Caricae (Fusicladium) 855. Caricae (Mycosphaerella) 855. Caricae (Phytophthora) 37. Caricae (Sphaerella) 855. Caricarumi (Asterina) 446.

Caricis (Puccinia) 1329.

Caricis-diffusa (Puccinia) 1329.

Caricis-Ribis (Puccinia) 1329.

Carioni (Hypoxylon) 1080.

Caricis-Urticae (Puccinia) 1329.

Carletoni (Ascobolus) 1221 carnea (Dermatea) 1225. carneolum (Lachnum) 1202. carneus (Haematomyces) 1240. carneus (Haematomyces) 1240 carnosum (Helotium) 1182. Carota (Humaria) 1165. Carpini (Eutypella) 711. carpinea (Apiospora) 914. carpinea (Sphaerognomonia) 708 carpinicola (Plagiostomella) 914 carpinicola (Uncinula) 223. Carpini (Neopeckia) 944. Caruanae (Sphaerella) 871. caruaniana (Gloniella) 1114. Carvi (Protomyces) 1317 Carvae (Gloeosporium) 1073. Carvae (Gnomonia) 1073. carvophyllinicola (Physalospora) 796 Casaresi (Coleroa) 399. Casaresi (Nectriella) 641. Caseariae (Myiocopron) 422. Caseariae (Pseudothis) 765. Cassiae (Asterina) 453. Castanha (Meliola) 309. Castaneae (Cucurbitaria) 1056. Castaneae (Scolecodothis) 630. Castelnaui (Laboulbenia) 175. Castilloae (Otthia) 947. catalaunica (Leptosphaeria) 987. Catalinae (Stichomyces) 136. catubigensis (Meliola) 311. caucasica (Gloniella) 1115. caucasica (Limacinula) 387. caucasica (Zukalia) 379. caulincola (Xylaria) 1102. caulinum (Lophiostoma) 1109. caulium, (Hypocrella) 692. caulivora (Eutypa) 725. Canthii (Asterina) 468. cavitensis (Meliola) 297. cavernosa (Xylaria) 1098. Cayaponiae (Dimerium) 254. Ceanothi (Cucurbitaria) 1057. Ceanothi (Thyridium) 771. Ceanothi (Valsa) 713.

cearensis (Polystictus) 1322. cedrinum (Lophodermium) 1124 Celaenopsis (Rickia) 78. celastrina (Metasphaeria) 953. celata (Diaporthe) 756. cellulare (Synchytrium) 19. Celsiae (Peronospora) 60. celticola (Meliola) 348. Celtidiae (Meliola) 347. Celtidis (Dimerium) 257. Centothecae (Phyllachora) 577. Centrolobii (Achorella) 548. Centrolobii (Dothidea) 548. Cephalariae (Peronospora) 54. Cephalariae (Stigmatea) 396. cephalodioides (Agyrium) 1142. cephalophora (Plasmopara) 64. Cephalotaxi (Guignardia) 781. Cephalotaxi (Laestadia) 781. Cerasi (Lachnella) 1200. Cerasi (Venturia) 899. Cerasi - microcarpae (Exoascus) 1301. cerasina (Diatrype) 739. cerasina (Nesolectria) 1273.

Cerevisiae (Saccharomyces) 1304. Cerletti (Chaetopyrena) 961. Cerletti (Metasphaeria) 961. cerviculata (Eutypella) 716. cerviculatus (Chitonomyces) 90. cesatiana (Sphaerella) 852. Cestri (Meliola) 345. Cestri (Stigmatea) 398. Chaerophylli (Plasmopara) 65. Chaerophylli (Protomyces) 1317. Chaetocnemae (Ceraiomyces) 139 chaetophilus (Tettigomyces) 86. chaetostoma (Chaetopyrena) 961. chaestostoma (Metasphaeria) 961. chalybaeum (Hypoxylon) 1079. chamaecristicola (Meliola) 302. Chamaecyparissi (Lophodermium) 1124.

Chamaecyparissi (Asterula) 436 Chamaemori (Gnomoniopsis) 708 Chamaemori (Rhopographina) 625.

Chamaemori (Rhopographus) 625 Chamaeropis (Auerswaldia) 609. Chamaeropis (Phacochora) 609. Chamaeropsis (Platystomum)1111 Chamaesycis (Peronospora) Chamaesycis (Peronospora) 55. Champereiae (Meliola) 340. Charrua (Laboulbenia) 195. chartae (Venturia) 899. chartarum (Agyrium) 1143. Cheiranthi (Peronospora) 46. Cheiranti-cheiri (Peronospora) 46 Cheirolophi (Eutypella) 717. Chenopodii (Peronospora) 39. Chenopodii ficifolii (Peronospora) 40.

Chenopodii-glauci (Peronospora)
40.

Chenopodii polyspermi (Peronospora) 41.

Chenopodii rubri (Peronospora)
41.

Chevalieri (Mycoderma) 1310. Chevalieri (Saccharomyces) 1306 Chevalieri (Zygosaccharomyces) 1313.

chilense (Trichothryrium) 508. chilensis (Cantharomyces) 97. chilensis (Cantharosphaeria) 923. chilensis (Dichomyces) 87. chilensis (Herpomyces) 100. chilensis (Stigmatomyces) 113. chilensis (Trichopeltina) 508. chilenus (Diandromyces) 85. Chiliotis (Eudimeromyces) 72, Chilomenis (Stigmatomyces) 111. chinensis (Trabutia) 558. chimophilina (Sphaerella) 397. Chiococcae (Meliola) 332. chirophora (Laboulbenia) 170. Chlaenii (Laboulbenia) 201. chlaeniicola (Laboulbenia) 182. Chloës (Graphyllium) 1123. chlorina (Lasiosphaeria) 977. chlorina (Sphaerella) 868. chlorostoma (Hypocrea) 667. Chodati (Lophionema) 1111.

Chodati 1314. Chorisporae (Peronospora) 47. Chrysanthemi (Protomycopsis) 1318. chrysolepis (Nectria) 664. Chrysophylli (Asterina) 471. chrysosperma (Apiocrea) 676. Chuquiragae (Strickeria) 1048. Chuquiragae (Teichospora) 1048. Cicutariae (Protomyces) 1317. ciliata (Dasyscypha) 1205. ciliata (Torrendiella) 1205. ciliatospora (Belospora) 1182, ciliatospora (Ciboria) 1182. ciliatula (Phialea) 1185. cincta (Valsa) 714. cinerea (Sphaeria) 1024. cinerella (Mollisia) 1193. cinereo-maculans (Stigmatea) 395 cingulata (Pseudothis) 767. cinnabarina (Lachnella) 760. cinnabarina (Nectria) 654. cinnabarina (Peziza) 760. cinnabarina (Sphaeria) 1068. cinnabarinus (Uleomyces) 1137. Cinnamomi (Glomerella) 793. Cinnamomi (Leptosphaeria) 985. Cinnamomi (Valsaria) 764. Cipadessae (Asterina) 460. circassica (Valsa) 711. circinalis (Rhizomyces) 136. circinans (Cleistothecopsis) 1333. circinans (Pycnoderma) 434. circinatum (Chaetomium) 843. Circopis (Rickia) 84. circularis (Hysterostomella) 410 circularis (Oxydothis) 630. circularis (Scolecodothis) 630. circumdata (Rickia) 83. cirsiicola (Pocosphaeria) 1003. Citri (Amphisphaeria) 941. Citri (Myriangium) 1137. Citri (Nectria) 663. Citri (Sphaerulina) 950. Citri (Valsaria) 764. citricola (Melanomma) 1011.

(Zygosaccharomyces) citricola (Meliola) 337. citricola (Meliola) 337. citrina (Woroninella) 17. citrincola (Diaporthe) 755. citrincola (Nummularia) 1090. citrinum (Synchytrium) 17. citrinus (Saccobolus) 1223. cladodiicola (Leptosphaeria) 997. cladonema (Buellia) 620. cladonema (Dothidea) 620. cladonema (Phaeodothis) 620. Cladeniae (Physalospora) 801. Cladoniae (Rosellinia) 831 Cladoniae (Thrombium) 801. clandestinum (Cenangium) 1227. clavarioides (Telephora) 1324. clavata (Corynelia) 1104, 1105. clavatispora (Meliola) 362. clavatisporum (Aithaloderma) 377. Clavicipitis (Cordyceps) 700. clavigera (Valsa) 711. clavisata (Dimeriella) 248. clavispora (Rhopographella) 622. clavispora (Meliola) 505. clavispora (Meliclinopsis) 362. clavispora (Micropeltella) 521. clavispora (Patouillardina) 505. clavispora (Seynesia) 428. 'clavispora (Theissenula) 231. clavulifera (Laboulbenia) 166. Clematidis (Pleospora) 1027. Clematidis (Sphaerella) 882. Clementiae (Dimerium) 256. Cleomes (Pleospora) 1038. Clerodendri (Amphisphaeria) 943 Clerodendri (Diatrype) 740. Clinocerae (Stigmatomyces) 120. Clivinae (Misgomyces) 144. clivinicola (Laboulbenia) 205. Clusiae (Clithris) 1271. Clusiae (Guignardia) 785. Clusiae (Meliola) 295. Clusiae (Sphaerella) 869. clypeata (Auerswaldia) 609. clypeata (Phaeochorella) 609. clypeata (Phyllachora) 605.

clupeata (Physalospora) 605. clypeata (Physalospora) 806. coacta (Lasiosphaeria) 974. Coarctatae (Didymella) 907. Cocae (Protomyces) 1346. coccifera (Castagnella) 553. coccifera (Henriquesia) 1112 cocciferum (Hysterium) 1112. coccinea (Nectria) 654. Coccinellidae (Stigmatomyces) 124. coccinellum (Hypoxylon) 1082. Coccocarpiae (Nesolechia) 1274. Cocoës (Palawania) 414. Cocoës (Peroneutypella) 731. Cocoës (Rosellinia) 832. cocoina (Anthostomella) 822. coenobitica (Valsa) 712. coeruleotecta (Philocopra) 848. Coffeae (Ophiobolus) 1066. coffaeicida (Leptosphaeria) 990. coffaeicola (Physalospora) 805. colchicum (Chaetothyrium) 378. Coleosanthi (Leptosphaeria) 981. Colladoi (Meliola) 341. Collematum (Cercidospora) 905. Collematum (Didymella) 905. Colliguajae (Meliola) 286. colludens (Valsaria) 763. Colocasiae (Sphaerella) 851. colubrina (Dictyopeltis) 513. Columbiae (Sphaerella) 889. Coluteae (Eutypella) 719. Coluteae (Valsaria) 763. coluteicola (Pleospora) 1032. comata (Asterina) 548. comata (Bombardia) 838. comata (Trichodothis) 548. comedens (Apiospora) 634. comedens (Scirrhiachora) 634. communis (Laboulbenia) 184. Comocladiae (Meliola) 264. compacta (Asterina) 549. compacta (Genea) 1147. compacta (Hydnocystis) 1147. Compositarum (Meliola) 277.

Compositarum (Phaeoschiffnerula) 233. compressa (Rickia) 80. compressula (Pyrenopeziza) 1196. compressus (Enterobryus) 33. compressus (Stigmatomyces) 122 coymiana (Sphaerella) 875. concursa (Xylaria) 1098. coneglanensis (Hydrophilomyces) 145. coneglanensis (Laboulbenia) 199. Couepiniae (Asterina) 476. Couepiniae (Asterolibertia) 476. conferta (Godronia) 1233. conferta (Meliola) 276, 355. conferta (Micropeltis) 1256. conferta (Nectria) 655. conferta (Pyrenobotrys) 635. conferta (Stigmatea) 635. conferta (Vizella) 1021. confertissima (Asterina) 458. confinium (Sphaerella) 877. confluens (Anthostomella) 823. confluens (Asterella) 427. confluens (Gymnoascus) 1145. confluens (Neohenningsia) 665. confluens (Pyronema) 1162. conformis (Hysteropatella) 1119. conformis (Humaria) 1164. confragosa (Meliola) 282. confusa (Nectria) 661. confusus (Exoascus) 1301. confusus (Pezizellaster) 1190. confusus (Rhizomyces) 137. confusus (Tettigomyces) 86. congener (Ceratomyces) 148. congensis (Pseudothis) 767. congesta (Rosellinia) 1079. congestum (Hypoxylon) 1079. conglomerans (Leciographa) 1290 conglomerans (Melaspilea) 1290. conglomeratiformis (Sphaerella) 853. congoensis (Meliola) 272. congregata (Metasphaeria) 954. congregata (Parodiella) 250. congregata (Peziza) 1160.

congregata (Phaeopezia) 1206. congregata (Phyllachora) 606. congregata (Plicaria) 1205. congregata (Trabutiella) 559. congruens (Phyllachora) 581. conica (Circinella) 6. conica (Morchella) 1155. conicola (Dasyscypha) 1203. conidiophorum (Pythium) 28. conigena (Mycosphaerella) 893. conigena (Rehmiellopsis) 893. Conii (Plasmopara) 65. Coniothyrium (Leptosphaeria) 997 conjuncta (Peltella) 423. conjunctum (Myiocopron) 423. Connari (Meliola) 279. Connari (Phyllachora) 569. Connari (Scolecopeltis) 525. connarina (Phyllachora) 559. Conocephali (Trabutia) 555. conoidea (Metasphaeria) 957. conorum (Sphaerella) 858. Conringiae (Peronospora) 47. consimilis (Micropeltis) 518. consimilis (Parodiella) 391. consociata (Metasphaeria) 961 consors (Valsaria) 765. continuus (Englerulaster) 490. contorta (Meliola) 329. contortus (Stigmatomyces) 110. controversa (Apiospora) 613 controversa (Dothidea) 613. controversa (Stigmochora) 613. convexa (Buellia) 1291. convexa (Leciographa) 1291. convexispora (Pyrenophora) 1041. convexula (Sphaerella) 870. convoluta (Cudonia) 1157. convolutum (Chaetomium) 840. conzattiana (Trabutia) 554. cookeana (Nummularia) 1090. Copelandi (Anthostomella) 824. Coprighis (Rickia) 75. coprogena (Ceratostomella) 1069. coprogena (Humaria) 1165. Copromyia (Lembosina) 429. coprophila (Sordaria) 847.

coprophilus (Mucor) 4. Copropori (Ecteinomyces) 141 coptengalis (Rickia) 80. coralloides (Calonectria) 679. Corchori (Valsa) 715. Cordiae (Dimerosporium) 243 Cordiae (Massarinula) 912. Cordiae (Stevensiella) 808. Cordiae (Trabutiella) 808. cordobensis (Calyptra) 371. cordylinicola (Sphaerella) 875. coriorum (Eurotium) 227 Corisae (Coreomyces) 151. cornealis (Mucor) 2. corniculariformis (Asterula) 241. corniculata (Peroneutypa) 708. Corni-maris (Lambertella) 1207. cornina (Apiosporella) 914. Cornuti (Rickia) 81. cornutus (Rhizomyces) 137. coronata (Amphisphaeria) 940. coronata (Bordea) 106. coronatus (Coccomyces) 1270. coronifera (Sordaria) 845. Coronillae (Apiosporiopsis) 794. Coronillae (Pleospora) 1032, 1037 Coronillae-junceae (Sphaerulina) 949. Coronopi (Peronospora) 47. corraecola (Asterina) 471.

Coronopi (Peronospora) 47.
corraecola (Asterina) 471.
corruscans (Metasphaeria) 952.
corruscans (Micropeltis) 515.
corticioides (Hypocrea) 672.
corticis (Melanomma) 1011.
corticis (Pseudosaccharomyces)
1307.

corticola (Belonidium) 1213. corticola (Griphosphaeria) 1024. corticola (Sphaeria) 1024. Coryli (Mamianiella) 708. Corymbosi (Sphaerella) 861. Corynitis (Dimeromyces) 68. Coryphae (Anthostomella) 822. Coryphae (Apiospora) 915. Coryphae (Apiosporella) 915. Coryphae (Hypoxylon) 1082. Costaericae (Phyllachora) 573. costaricensis (Puiggarina) 608. costaricensis (Seynesia) 428. crassaria (Karschia) 1281. crassicollis (Stigmatomyces) 117. crassipes (Laboulbenia) 173. crassipila (Trichosphaeria) 810. crassispora (Stictis) 1252. crassus (Autoicomyces) 147. crataegicola (Septoria) 883. crataegicola (Sphaerella) 883. Craterium (Trochila) 1262. Cratyliae (Phyllachora) 591. creberrima (Asterinella) 485. creberrima (Gibberella) 686. creberrima (Guignardia) 779. crebra (Asterina) 463. crebra (Metasphaeria) 958. crenatissima (Meliola) 301. crenato-furcata (Meliola) 313. crepidicola (Protomyces) 1315. Crepidis (Protomyces) 1315. Crepidis-paludosae (Protomyces) 1316. crinita (Aleurina) 1207. crinita (Trichaleuris) 1207. crispata (Laboulbenia) 162.

crispatus (Rhizomyces) 137. cristalligerum (Lachnum) 1201. cristatella (Laboulbenia) 161. Crotonis (Asterina) 453. crozalsiana (Didymella) 906. crozalsiana (Leptosphaeria) 992. crozalsiana (Sphaeria) 906. Crozalsii (Leptosphaeria) 1001. Crozalsii (Pleospora) 1034. crucifera (Laboulbenia) 188. crustacea (Rosellinia) 830. crustacea (Tassiella) 830. Cryptici (Laboulbenia) 195. Cryptoderis (Pleuroceras) 708. cryptogea (Phytophthora) 1332. cryptotheca (Laboulbenia) 207. Crysobalani (Sphaerella) 882. crystallina (Orbilia) 1239. ctenotricha (Chevalieria) 391. ctenotrichum (Dimerosporium) 391.

cubense (Catacauma) 564. cubense (Hysterium) 1118. cubispora (Genea) 1147. Cucumeris (Nectriella) 641. Cucurbitacearum (Meliola) 281. Cucurbitae (Leptosphaeria) 995. culmicola (Chaetopyrena) 961. culmicola (Lasiosphaeria) 976. 997. culmicola (Metasphaeria) 961. culmicola (Microdothella) 639. culmigena (Hysteropsis) 1258. culmigena (Pezizella) 1189. culmorum (Hypoxylon) 1089. culmorum (Lasiosphaeria) 975. Cunninghamiae (Sphaerella) 858. Cupaniae (Lizoniella) 631. Cupaniae (Meliola) 341. Cupaniae (Pseudosphaerella) 631 cupularis (Limacinula) 387. Curatellae (Morenoëlla) 502. curtipes (Cucujomyces) 215. Curtisi (Cryptomyces) 1257. curvasca (Pleospora) 1025. curvata (Meliola) 356. curvata (Saprolegnia) 1331. curvatus (Corethromyces) 131. curvicola (Melanospora) 649. curvirostris (Stigmatomyces) 121. curviseta (Meliola) 362. curviseta (Phaeodimeriella) 257. curvispora (Scirrhiella) 914. curvispora (Uncinula) 224. curvispora (Uncinula) 224. curvulispora (Phyllachora) 601. cuyanum (Hysterographium)1121 cuyanum (Polysterium) 1122. cyathea (Griggsia) 639.

Cyatheae (Dasyscypha) 1205.

cyathearum (Dimeriella) 249.

cyathoidea (Otthiella) 922.

cyathoidea (Phialea) 1185.

cyclopode (Meliola) 277.

Cydoniae (Physalospora) 805.

cydoniicola (Diaphorte) 753.

cyathearum (Lasiostemma) 249.

Cybocephali (Stichomyces) 136.

cylindrocarpus (Cucuiomyces)213 cylindrophora (Asterina) 454. cylindrophora (Meliola) 301. cylindrospora (Absidia) 6. cylindrospora (Melanopsamma) 920 cymindicola (Laboulbenia) 186. Cynanchi (Cenangium) 1227. Cynomarathri (Puccinia) 1329. Cyperi (Balansia) 696. Cuperi (Scirrhia) 611. Cyperi (Scirrhodothis) 611. cyphelloides (Peroneutypa) 729. Cytisi (Melanconis) 747. cyttarioides (Glaziella) 647. dacinus (Stigmatomyces) 111. Dactylidis (Sphaerella) 566. Daemonoropis (Anthostomella) 821. Daemonoropis (Merrilliopeltis) 916. Daemonoropis (Oxydothis) 916. Dailodonti (Laboulbenia) 201. dakotense (Graphyllium) 1122. dakotensis (Pezizella) 1188. Dalbergiae (Auerswaldia) 591. dalbergiicola (Phyllachora) 591. danaëalis (Rickia) 82. Dangeardi (Zygorrhynchus) 10. Daphnes (Nectria) 654. Daphniphylli (Sphaerella) 862. Dasycarpi (Rhytisma) 1266. Dawei (Phyllachora) 599. dealbans (Sphaerella) 875 Dearnessii (Metasphaeria) 955. Dearnessii (Pleospora) 1031. Dearnessii (Pyrenopeziza) 1197. De Baryana (Achlya) 26. decarthricola (Bordea) 106. decipiens (Asterina) 470. decipiens (Auerswaldia) 540. decipiens (Corethromyces) 132. decipiens (Haplosporangium) 12. decipiens (Mimeomyces) 95. decipiens (Synchytrium) 17. decolorans (Didymosphaeria) 928 decolorans (Lembosia) 492

decolorans (Protascus) 15. decolorans (Wolkia) 15. decorata (Achlua) 26. decorticans (Valsa) 711. decumbens (Chantransiopsis) 216 decumbens (Dissophora) 12. deformans (Hypoderma) 1123 deformans (Otthia) 946. deformans (Physoderma) 21. degenerans (Bolosphaera) 926. degenerans (Dimerium) 926. degenerans (Hypocrea) 670. degenerans (Pseudophacidium) 1260. degenerans (Sporonema) 1260 Delemar (Mucor) 7. Delemar (Rhizopus) 7. Deltomeri (Laboulbenia) 159. Demangei (Ascobolus) 1222. deminuta (Guignardia) 783. Demonoropis (Anthostomella) 821. dendritica (Phyllachora) 602. densa (Asterina) 467. densa (Diaporthe) 756. densa (Trichothyriopsis) 507. densum (Hydnangium) 1328. densum (Trichothurium) 507. Dentariae (Peronospora) 46. Dentariae macrophyllae (Peronospora) 47. denticulatus (Monoicomyces) 94. dentifera (Meliola) 272. depauperata (Rickia) 81. depressa (Fracchiea) 777. depressa (Pyrenophora) 1045. depressula (Meliola) 268. depressulum (Hyaloderma) 232. depressum (Haplostroma) 745. Dercyli (Laboulbenia) 175. dermatoidea (Mollisia) 1192. dermatoidea (Lagerheima) 1276. Derridis (Auerswaldia) 592. Derridis (Meliola) 303. Desgodii (Laboulbenia) 172. Desmazierii (Eurotium) 227.

Desmazierii (Sacidium) 911

Desmodii (Aphysa) 925. Desmodil (Putternansiella) 838. Desmodii (Phaeosphaerella) 921 desmodiicola (Meliola) 305. desmosporum (Peristomium) 229. Detonia (Lamprospora) 1206. Detonia (Phaeopezia) 1206. devexirostris (Ecteinomyces) 140. Diabroticae (Laboulbenia) 205. diaphana (Asterina) 472. diaphana (Scutula) 1284. diaphorella (Asterina) 471. Diantherae (Bagnisiella) 1134. dianthicola (Sphaerella) 855. Diapetis (Stigmatomyces) 120. dichotoma (Rickia) 81. dichromotricha (Pyrenophora) 1043. Dickiae (Aulographum) 411. Dickiae (Lembosiodothis) 411. Didymopanacis (Sphaerella) 852. Diedickei (Physalospora) 796. Dieffenbachiae (Meliola) 269. diffusa (Podocapsa) 1145. diffusum (Podocapsium) 1146. digitatus (Hydrophilomyces) 145. dilatata (Enthosiomella) 823. dilatata (Laboulbenia) 198. Dilleniae (Asterina) 449. Dilleniae (Asterina) 449. Dimeriae (Phyllachora) 578. diminuens (Naevia) 1245. Dineustris (Laboulbenia) 172. Dinochloae (Dimerosporium) 369 Dinochloae (Guignardia) 784. Diopsidis (Endosporella) 220. Dionochloae (Physalospora) 799. Dioscoreae (Bagnisiopsis) 390. Dioscoreae (Phyllachora) 406. dioscoreicola (Sphaerella) 860. Diospyri (Meliola) 284. Diospyri (Meliola) 284.

Diplotaxidis (Peronospora) 48. Dipteridis (Melanoplaca) 414. Dipterocarpi (Asterinella) 480. Dischidiae (Phyllachora) 56%. disciformis (Auerswaldia) 541. Discocerinae (Stigmatomyces) 113 discoidea (Cocconia) 628. discoidea (Nectria) 657. discoidea (Valsaria) 764. discolor (Phacidiella) 1261. discophora (Anthostomella) 818. discophora (Discosphaerina) 793. Discopomae (Rickia) 77. discrepans (Calloria) 1241. discreta (Rickia) 78. discriminis (Peroneutypa) 729. disjuncta (Hypocrella) 692. disjunctum (Hypoxylon) 1081. dislocatus (Ceraiomyces) 139. dispar (Dothidella) 614. dispar (Endodothella) 614. dispersa (Rosellinia) 835. disseminata (Molleriella) 1139. disseminata (Phyllachora) 588. disseminata (Setella) 384. distincta (Asterina) 476. distinguenda (Asterinella) 484. distinguenda (Laboulbenia) 192. distortus (Stigmatomyces) 116. ditopa (Ditopella) 708. ditissima (Asterina) 462. ditissima (Sphaerella) 877. ditricha (Asterina) 275. ditricha (Meliola) 275. divaricatus (Stigmatomyces) 110. divergens (Sphaerulina) 949. divergens (Stigmatomyces) 108. diversipes (Laboulbenia) 191. diversispora (Nesolechia) 1275. Dohrni (Eumisgomyces) 144. Dolicaonthis (Laboulbenia) 159. Dolichi (Aecidium) 17. Dolichi (Woroninella) 17. (Phyllachora) dolichogena dolichospora (Calomastia) 829. dolichospora (Phyllachora) 598. dolichospora (Rocellinia) 829.

Diospyri (Sphaerella) 860.

Dipholidis (Meliola) 344.

diplochaeta (Meliola) 312.

diplochaeta (Meliola) 312.

Diplocoeli (Cucujomyces) 214.

Doliclum (Leptosphaeria) 981. Dombeyae (Phyllachora) 604. Dombeyae (Physalospora) 604 dominicana (Atichia) 1299. dominicensis (Rickia) 81. donacina (Acerbia) 1059. donacina (Anthostomella) 819. donacina (Massarinula) 912. donacina (Phyllachora) 578. Donacis (Epichloë) 696. dothideoides (Clypeolum) 610. dothideoides (Rehmiodothis) 610 Drabae (Peronospora) 48. Drabae (Peronospora) 48. Drimydis (Bagnisiella) 635. Drimydis (Crotone) 635. Drimydis (Lembosia) 549. Drimydis (Leveillella) 549. Drimydis (Montagnella) 635, drobnjakensis (Sphaerella) 877. dryadea (Leptosphaeria) 980. Drymariae (Sphaerella) 855. Drymeia (Didymella) 902. drypeticola (Phyllachora) 572. dubia (Pyrenophora) 1044. dubia (Sphaerella) 887. dubium (Exobasidium) 1325. dubius (Coccomyces) 1269. Ducellieri (Physalosporina) 645. Dulcamarae (Metasphaeria) 960. Dulcamarae (Platystomum) 1111 Durionis (Homostegia) 626. durmitorensis (Guignardia) 792. durmitorensis (Nemacyclus) 1254 Dussiae (Catacauma) 560. duvauicola (Zignoella) 954. Dysonichae (Laboulbenia) 176. Earlii (Meliola) 349. Ebeni (Coniothyrium) 1009. Ebeni (Hendersonia) 1009. Ebeni (Melanomma) 1009. ebulicola (Pyrenopeziza) 1196. ebulina (Sphaerella) 855. echinata (Acantharia) 1132. echinata (Mycolangloisia) 507. echinatum (Dimerosporium) 1132 Ectocarpii (Pleotrachelus) 14.

Edgeworthiae (Dothidea) 547. effusa (Boerlagella) 1023. effusa (Guignardia) 784. offusa (Laestadia) 784. esfusa (Nectria) 654. effusa (Peronospora) 40. effusa-major (Peronospora) 39. effusum (Ascocorticium) 1299. eifusum (Flypoxylon) 1080, 1083. egenula (Botryosphaeria) 812. Elacagni (Amphisphaeria) 939. Elaeagni (Asterinella) 481. Elaeagni (Pleomassaria) 1046. Elaeagni (Valsa) 710. Elaeocarpi (Asterina) 452. Elaeocarpi (Meliola) 284. Elaphri (Laboulbenia) 202. elatina (Ciboria) 1182. elatina (Rutstroemia) 1182. elatum (Microthyrium) 425. elegans (Biatora) 1276. elegans (Biatorella) 1276. elegans (Cucujomyces) 214. elegans (Empusa) 13. elegans (Eudimeriolum) 245. elegans (Helodiomyces) 145. elegans (Hydrophilomyces) 145. elegans (llytheomyces) 125. elegans (Peyerimhoffiella) 208. elegans (Rickia) 78. elegantissima (Laboulbenia) 201. elegantissimus (Stephanomyces) 128. elegantula (Seynesia) 412. ellipsospora (Hydnotria) 1150. elliptica (Leptodothiora) 1265. elliptica (Rickia) 78. ellisianum (Chaetomium) 240. Elmeri (Acrospermum) 1129. Elmeri (Anthostomella) 825. Elmeri (Anthostomella) 1018. Elmeri (Asterina) 470. Elmeri (Catacauma) 562. Elmeri (Meliola) 331. Elmeri (Phyllachora) 562. Elmeri (Schizochora) 565. Elmeri (Trabutia) 555.

elongata (Eutypella) 721 elongata (Nadsonia) 1311. elongantum (Melogramma) 1016. elongatus (Chitonomyces) 88. elongatus (Chitonomyces) 88. elongatus (Coreomyces) 151. Elymi (Ophiodothis) 698. Embeliae (Hyponectria) 643. Embeliae (Phyllachora) 570. Embeliae (Physalospora) 797. emergens (Venturia) 899. emersa (Melanopsamma) 920. eminens (Thyridaria) 769. Emmoti (Crotone) 635. Emmoti (Dothidea) 635. Empetri (Cenangium) 1228. Empetri (Cenangium) 1232. Empetri (Duplicaria) 1255. Empetri (Phaeangella) 1232 encaustica (Epiphora) 624. encaustica (Homostegia) 624. encaustica (Telimena) 624. endocrypta (Dothidella) 550. endocrypta (Leveillina) 550. endogaea (Laboulbenia) 177. endogaeus (Dioicomyces) 105. Endospermi (Sphaerella) 862 Engelhardtiae (Phyllachora) 586. ensiferus (Chitonomyces) 89. entomophila (Amphoromorpha) 217. epicalamium (Pseudohelotium) 1191 epicrassa (Buellia) 933. epicrassa (Didymosphaeria) 933. epigena (Melaspilea) 1282. Ep.lobii (Aulograhum) 427. Epilobii (Aylographella) 427. epimelaena (Kalmusia) 770. epimyces (Calonectria) 680. epimyces (Hyalocrea) 680. epimyces (Loranthomyces) 507. epimyces (Pezizella) 1187. Ephedrae (Acerbia) 1058. Ephedrae (Fenestella) 773. Ephedrae (Pyrenophora) 1043. Ephedrae (Physalospora) 798.

epiphylla (Peronospora) 42. epiphylla (Peronospora) 39. epiphylla (Scutula) 1284. epipolytrope (Didymella) 907. epiramalina (Pharcidia) 895. Episcaphae (Rickia) 83. Episcaphulae (Rickia) 84. episemoides (Karschia) 1281. episemoides (Lecidea) 1281. episphaeria (Neopeckia) 944. epistigmella (Pharcidia) 895. Epitrichis (Ceraiomyces) 139. epitypha (Phyllachora) 666. epitypha (Septomazzantia) 666. epixyla (Micropeltis) 515. equinus (Rhizopus) 9. erebia (Phyllachora) 590. erectiuscula (Laboulbenia) 190. eres (Diaporthe) 708. ericetorum (Phacopsis) 1294. ericetorum (Stigmatidium) 1294. erigeronicola (Dimeriella) 247. erinacea (Ophionectria) 689. Erlangeae (Sphaerella) 856. eryngina (Sphaerella) 890. Eriobotryae (Leptosphaeria) 999. Eriobotryae (Phaeosphaeria) 999. Eriobotryae (Pleospora) 1035. Eriochloae (Phyllachora) 579. Eriodendri (Phaeosphaerella) 924 Erophilae (Peronospora) 48. erostris (Ceratomyces) 148. Erucastri (Peronospora) 48. Erysimi (Peronospora) 48. Erysimi cheiranthoidis (Peronospora) 48. Erysimi repandi (Peronospora) 48. erysiphina (Zukalia) 380. Erythraeae (Kretzschmaria) 1084 erythraea (Peziza) 1160. erythraea (Xylaria) 1099. erythrina (Calonectria) 682. Erythrinae (Meliola) 305. erythroseptica (Phytophthora) 35, 37. Erythroxyli (Sphaerella) 861.

Escalerae (Pleosphaeria) 1054 Escalerae (Pleospora) 1027. escaleriana (Pleospora) 1031. Escalloniae (Phaeophacidium) 1258. Escalloniae (Phyllachora) 559. Escalloniae (Trabutia) 559. escharoides (Asterina) 447, 455. Espeletiae (Phyllachora) 568. Espinosae (Cyttaria) 1154. Esulae (Peronospora) 55. etrusca (Laboulbenia) 197. Eucalypti (Hypospila) 1076. eucalyptina (Didymosphaeria-934. Euconni (Stigmatomyces) 119. eudonia (Xylaria) 1098. Eudorinae (Rhizophidium) 19. euganea (Physalospora) 807. Eugeniae (Angatia) 1137. Eugeniae (Asterina) 461. Eugeniae (Lembosia) 494. Eugeniae (Micronectria) 691. euglypta (Coccodothis) 549. eyglypta (Phyllachora) 549 cumetabola (Laboulbenia) 206. Eumorphi (Rickia) 83. eupatoricola (Sphaerella) 857. Eupatorii (Phaeodothiopsis) 617 euphorbiacea (Gnomonia) 1073. Euphorbiae (Plagiostoma) 708. Euphorbiae glyptospermae (Peronospora) 55. Euphorbiae-spinosae (Guignardia) 782. Euplinis (Laboulbenia) 204. eupyrena (Didymella) 909. europaea (Eupropolis) 1248. europaea (Zukalia) 381. Europsis (Rickia) 82

Eurotiae (Albugo) 34.

Eurotiae (Cystopus) 34.

Euryae (Sphaerella) 888.

euryspora (Nectria) 658.

Eurotiae (Didymella) 902.

Eurysomae (Laboulbenia) 175.

Euschizomeri (Laboulbenia) 203.

eutypoides (Didymella) 933, 910. Euxesti (Rickia) 82. euzercenalis (Rickia) 79. evanescens (Dothidella) 412. evanescens (Hysterostroma) 412 Evansii (Albugo) 34. Evansii (Cystopus) 34. Evansii (Phyllachora) 586. Evansii (Trabutia) 557. Evenymi (Diaporthe) 752. Evonymi (Micropeltis) 515. examinans (Dothidea) 540. exappendiculata (Calonectria) 682 excavata (Curreya) 552. excavata (Dictyodothis) 552. excavata (Rickia) 79. excavatus (Chytonomyces) 91 excavatus (Stigmatomyces) 118. excelsa (Xylaria) 1102. excelsior (Beloniopsis) 1216. excelsum (Hypoxylon) 1083. excipulata (Leucopezis) 1198. exculpta (Parmulina) 415. eximia (Chaetosphaeria) 1014. exigua (Phyllachora) 579. exigua (Sphaerella) 886. exiguistroma (Diaporthe) 758. eximia (Pezicula) 1194. Exocarpi (Meliola) 341 extensa (Hypocrea) 668. extranea (Diaporthe) 758. Faberi (Phytophthora) 35. Fagarae (Asterina) 469. fagaricola (Leptosphaerella) 1000 fagaricola (Leptosphaeria) 1000. Fagi (Phytophthora) 35. faginea (Botryosphaeria) 975. faginea (Lasiosphaeria) 975. faginea (Melanconis) 747. Fagniezi (Rhachomyces) 210. Fagopyri (Sclerotinia) 1180. Fagraeae (Meliola) 310.

Eusinae (Stigmatomyces) 120.

Eutypae (Didymosphaeria) 929.

Euterpes (Eutypa) 727.

Eutypa (Holstiella) 767.

Fagraeae (Morenoëlla) 501. Fairmani (Beloniella) 1212. Fairmani (Belonium) 1212. Fairmani (Calloria) 1241. falcata (Eutypa) 727. falcata (Meliola) 334. falcatus (Dioicomyces) 102. falcatus (llytheomyces) 126. fallaciosa (Asterina) 445. fallax (Protomyces) 1317. farinacea (Mycobilimbia) 1290. fasciculata (Bombardia) 847. fasciculata (Laboulbenia) 170. fasciculata (Rizalia) 364. fasciculata (Sperormia) 1015. Feae (Laboulberia) 202. fecunda (Dictyothyrina) 512. fecundum (Myiocopron) 512. Feijoae (Asteridium) 1132. Feijoae (Phanerococcus) 1132. felipponeana (Dothidina) 541. felipponeana (Auerswaldia) 541. fenestrata (Pseudovalsa) 1016. fennica (Mazzantia) 592. fertilissima (Diplochorella) 632. festiva (Guignardia) 783. testiva (Laestadia) 783. Festucae (Pyreniella) 807. Festucae (Sphaeria) 807. fibrincola (Pleosphaeria) 1052. Fici (Ophiodothella) 629. Fici (Ophiodothis) 629. Fici - Dekdekenae (Trabutia) 556 Fici - elasticae (Leptosphaeria) 988. Fici - Hochstetteri (Trabutia) 556. ficina (Physalospora) 802. ficina (Seynesia) 429. ficina (Tephrosticta) 1023. Ficium (Meliola) 323. Fieberi (Chaetomium) 829. Fiebrigii (Auerswaldia) 541. filarius (Ecteinomyces) 141. filicicola (Coccomyces) 1267. filicina (Leptopeltis) 394. filicina (Monorhizina) 415. filicina (Rhytisma) 415.

filicinum (Leptopeltis) 1255. filifera (Rickia) 79. filiformis (Xylaria) 1102. fimbriata (Mamiania) 708. fimbriatum (Aulographum) 438. fimbriatum (Phragmothyrium) 430 fimbriatum (Pycnocarpon) 509. fimicola (Ascophanus) 1219. fiscicolum (Chaetomium) 839. Flagellariae (Anthostoma) 743. flagellata (Laboulbenia) 192. Hagellifera (Rickia) 84. flageoletiana (Nectria) 659. flageoletiana (Nitschkea) 776. flammeola (Sphaerostilbe) 666. flava (Dothidella) 546. flavido-carnea (Nectria) 655. flavidulus (Arachnomyces) 228. flavo-lanatus (Hypomyces) 675. flavum (Thyridium) 771. flavus (Gymnomyces) 1328. flexata (Laboulbenia) 158. floerkeana (Rosellinia) 831. fluens (Endothia) 760. fluens (Sphaeria) 760. fluminensis (Phyllachora) 604. fluminensis (Physalospora) 604. fluorescens (Ascophanus) 1219 foliicola (Leptosphaeria) 993, 997. folliculata (Leptosphaeria) 995. formicarum (Tyridiomyces) 1304: formicetorum (Corethromyces) 132. tormicicola (Rickia) 74. Formicillae (Dioicomyces) 102, formosa (Laboulbenia) 195. Fourcroyae (Amphisphaeria) 938 Forsteroniae (Meliola) 266. fossarum (Biatorella) 1276. fossarum (Lecidea) 1276. fossarum (Tromera) 1276. fragilis (Autoicomyces) 147. fragillima (Nummularia) 1089. fragosoana (Phyllachora) 573. Freycinetiae (Guignardia) 790. Freycinetiae (Hypoxylon) 1082

frigidella (Lecidea) 1275. frigidella (Nesolechia) 1275: Fritzei (Phaeospora) 1003. fructicola (Didymella) 911. fructicola (Didymosphaeria) 934. fructicola (Didymosphaeria) 911. Frullaniae (Colèroa) 399. Frustulosae (Müllerella) 816. fucicola (Didymosphaeria) 927. fuliginosa (Antennulariella) 249. fuliginosa (Laboulbenia) 161. fulvescens (Ombrophila) 1235. fulvo - ochraceum (Hypoxylon) 1081. fulvus (Hymenogaster) 1327. fumaginea (Asterella) 441. funebris (Laboulbenia) 161. funeralis (Laboulbenia) 160. funerea (Laboulbenia) 191. fungorum (Amphisphaeria) 939. Funtumiae (Meliola) 266. Funtumiae (Nectria) 651. furcata (Rickia) 77. furcifera (Lachnea) 1173. furcillata (Meliola) 325. furfuraceum (Odontotrema) 1351 fusca (Tapesia) 1199. fuscata (Laboulbenia) 157 fuscescens (Dioicomyces) 101. fuscescens (Laboulbenia) 182. fuscicola (Lulworthia) 1059. fuscidula (Leptosphaeria) 996. fuscines (Stigmatomyces) 124. Fusco-atrae (Trichothecium) 927. fusco-atratum (Lecanidion) 1287. fusco-coriacea (Guignardia) 782. fusco-disca (Nummularia) 1089. fusco-maculans (Rosellinia) 830. fusco-pallidula (Cenangella) 1231 fusco-purpurea (Nectria) 652. fuscula (Laboulbenia) 180, 198. fusiforme (Chaetomium) 841. fusispora (Astrosphaeriella) 937. fusispora (Homostegia) 624. fusispora (Lachnea) 1174. fusispora (Phragmocarpella) 624. fusispora (Rosellinia) 829.

Gaduae (Eutypa) 726. Gaduae (Rhopographella) 622 gahianum (Hysterium) 1116. gaillardiana (Meliola) 329. Gailloniae (Pleospora) 1036. Galactiae (Meliola) 304. galactina (Guignardia) 785. galactina (Laestadia) 786 Galactiniae (Physalospora) 802. Galatea (Sphaerella) 891. galeatus (Tettigomyces) 86. Galeritae (Laboulbenia) 190. Galii (Mazzantia) 708. Galii veri (Peronospora) 59. Galiorum (Leptosphaeria) 991. Galipeae (Meliola) 338. gallica (Ceriosporella) 962. gallica (Pirottaea) 1200. gallica (Zignoella) 967. gallicum (Lopadostoma) 745. gallifera (Nectria) 655. galligena (Leptosphaeria) 1002. Gambellii (Dictycchora) 628. Garciae (Catacauma) 551. Garciniae (Meliola) 295. Garciniae (Scolecopeltis) 524. Gardnerii (Genea) 1147. Gardnerii (Tuber) 1153. Garovaglii (Didymella) 905. Gastrolobii (Achorella) 548. Gastrolobii (Lizoniella) 548. Gaultheriae (Leptosphaeria) 982. Gaultheriae (Phacidium) 1260. gaiimanniana (Peronospora) 44. gelatinicola (Eurotium) 227. gelatinosa (Calloriopsis) 1242. gelatinosa (Coryne) 1242. gelatinosa (Mollisia) 1242. gemmata (Miniaecia) 1189. gemmata (Pezizella) 1189. geniculata (Meliola) 265. geniculata (Uncinula) 223. geniculatus (Cryptandromyces) 213. geniculatus (Synandromyces) 107.

Genistae (Diaporthe) 757.

Genistae - ibericae (Pleospora) 1038. Gentianae (Pichia) 1312. Gentianae (Saccharomyces) 1305 gentianaecolum (Lophiotrema) 1107. geografica (Lembosia) 403. geografica (Pseudolembosia) 403 Geographici (Nesolechia) 1276. Geographici (Rhymbocarpus) 1276. Geoporae (Guttularia) 240. Geostibae (Monoicomyces) 94. geophilus (Ascobolus) 1222. germanicus (Pseudosaccharomyces) 1308. Gesneraceae (Cocconia) 491. Gesneraceae (Symphaster) 491. Gesneriae (Meliola) 292. gentilis (Phyllachora) 599. Giardi (Laboulbenia) 158. gibbulosa (Laboulbenia) 206. gibbus (Trenomyces) 129. gigantea (Hypocrea) 668. gigantea (Pleomassaria) 1046. gigantea (Poronia) 1095. giganteum (Dictyothyrium) 512. Gigantochloae (Auerswaldia) 540. Gigantochloae (Clypeosphaeria) 1007 Gigantochloae (Dothidella) 545. (Metasphaeria) Gigantochloae 954. Gigantochloae (Phaeodothis) 618. Gigantochloae (Rhopographella) 622. Gigantochloae (Scirrhia) 546. Gigantochloae (Xylaria) 1097. gigaspora (Eutypa) 728. gigaspora (Rosellinia) 744. gigasporum (Anthostoma) 744. gilvum (Lophodermium) 1125. gilvus (Nemacyclus) 1253. Givesii (Medusomyces) 1314. glaberrimum (Cenangium) 1228. glabra (Meliola) 335.

glabrata (Tryblidiella) 1119. glabroides (Meliola) 273. glabrum (Hydnangium) 1328. glacialis (Didymella) 905 glacialis (Humaria) 1167. glacialis (Plicaria) 1167 Glandulosae (Valsa) 715. glaucescens (Xylaria) 1097. Gleditschiae (Meliola) 306. Gliricidiae (Cenangella) 1231. Gliricidiae (Eutypella) 720. Gliricidiae (Meliola) 306. Gliricidiae (Nectria) 663. Gliricidiae (Nummularia) 1089. slobifera (Asterina) 230. globiferum (Euthrypton) 230 globosa (Cyphella) 1324. globosa (Hupocrella) 695. globosum (Synchytrium) 18. globosus (Mucor) 3. globulifera (Asterina) 476. globulifera (Lembosia) 497. globulifera (Mortierella) 13. globulosa (Darwiniella) 551. globulosa (Phragmodothella) 551 Glochidii (Phvllachora) 572. Glomelliferae (Karschia) 1279. Glomelliferae (Lecidea) 1279. glomerata (Achlya) 27. glomerata (Saprolegnia) 24. glonicidea (Lembosia) 492. glossophorus (Dioicomyces) 102. glyceriincola (Beloniopsis) 1216. Glycosmidis (Phyllachora) 603. Gmelinae (Asterinella) 485. Gnaphalii (Ophiobolus) 1063. Gnidii (Sphaerella) 889. Gnipae (Phyllachora) 606. gomphoidea (Kretzschmaria) 1084. Gouaniae (Catacaumella) 564. gracilipes (Laboulbenia) 155. gracilis (Asterinella) 481. gracilis (Dichomyces) 87. gracilis (Lachnaster) 1202. gracilis (Laboulbenia) 187, 192. gracilis (Phacidium) 1255.

gracilis (Rhizomyces) 137. gracilis (Rickia) 82. Graffii (Dimorina) 246. graffianus (Ophiobolus) 1053. graminella (Telimena) 623. graminicola (Bremia) 63. graminicola (Calonectria) 680. graminicola (Calonectria) 681. graminicola (Stictis) 1252. graminis (Asteroma) 868. graminis (Hypochnus) 1324. graminis (Phyllachora) 577. graminis (Sphaerella) 868. grammocarpa (Asterina) 473. grammodes-reticulata (Parodiella) 251.

Grammatophylli (Microthyrium)

grandis (Naevia) 1246. grandis (Palawania) 414. grandis (Pleomassaria) 1047. grandis (Titanella) 1047. grandispora (Anthostomella) 819 granulata (Humaria) 1165. granulosa (Laboulbenia) 157. graphidioides (Peroneutypella) 730.

graphica (Catacauma) 562. graveolens (Geopora) 1149. Gravesii (Rosellinia) 828. gregaria (Sydowia) 964. Grenadae (Chitonomyces) 90. grenadinus (Stigmatomyces) 114. Grewiae (Niptera) 1210. Griffitshii (Parodiella) 251. Grindeliae (Leptosphaeria) 981. grisea (Cyathicula) 1194. grisea (Laboulbenia) 200. grisea (Peronospora) 61. grisella (Dasyscypha) 1206. grisella (Microscypha) 1206. griseo-lilacinus (Mucor) 3. griseosporus (Mucor) 5. griseum (Pezoloma) 1194. grossum (Trichothecium) 927. groteana (Meliola) 324. groveana (Scirrhia) 634.

groveana (Scirrhiachora) 634. Grevei (Phaeodothis) 619. Grylli (Laboulbenia) 160. Gryllotalpae (Rickia) 84. Gryllotalpae (Tettigomyces) 86. guaranitica (Hypocreophis) 695. guaranitica (Vizella) 1021. guaraniticus (Phymatodiscus)

Guareae (Meliola) 317.
guareicola (Meliola) 318.
Guayavae (Valsa) 713.
Guazumae (Phyllachora) 604.
Guettardae (Stigmatea) 397.
guignardicides (Physalospora) 800
Guilielmi (Vizella) 402.
Guilielmi (Vizella) 1021.
guineensis (Laboulbenia) 199.
Guttiferae (Sphaerella) 859.
gymnanthicola (Meliola) 287.
Gymnosporangii (Calonectria) 679.

Gymnosporiae (Meliola) 276. Gynerii (Rhopographella) 622. gyrinicola (Laboulbenia) 173. Gurolophii (Celidiopsis) 1290. Gyrolophii (Leciographa) 1290. gyrosa (Cryphonectria) 751. gyrosa (Endethia) 760. gyrosa (Endothia) 760. gyrosa (Hypocrea) 671. gyrosa (Nectria) 761. haesitans (Pharcidia) 897. Halacsyi (Nesolechia) 1273. halepensis (Dothidea) 1255. halepensis (Dothidea) 617. halepensis (Thyriopsis) 617. Halimodendri (Cucurbitaria) 1057 Halimodendri (Pleospora) 1038. Halticae (Laboulbenia) 161. Hamamelidis (Botryosphaeria) 812.

hamata (Meliola) 263. hamata (Pithyella) 1169. haplochaeta (Meliola) 363. Haplopappi (Dothidella) 631.

Haplopappi (Pseudosphaerella) 1 631. haraeana (Dothidea) 763. haraeana (Sphaerella) 870. haraeana (Valsaria) 763. harana (Meliola) 337. Harioti (Peronospora) 57. Harknessii (Genea) 1148. harpalicola (Laboulbenia) 193. havanensis (Endothia) 762. Hederae (Lophiotrema) 1106. hedericola (Lecanidion) 1288. I-ledycariae (Trichopeltula) 509. helicoides (Aphanomyces) 28. Heliconiae (Dothidella) 635. Heliconiae (Pyrenobotrys) 635. helicoferus (Chitonomyces) 90. helicophora (Laboulbenia) 166. Helicteres (Guignardia) 792. Heliopsidis (Montagnella) 638. Heliopsidis (Rosenscheldia) 638. Hellebori (Dothisphaeropsis) 635 Hellebori (Haplotheciella) 635 Hellebori-foetidi (Leptosphaeria) 998.

Helminthiae (Protomyces) 1316. Helodis (Sphaerella) 869. helotioides (Ombrophila) 1237. helvetica (Laboulbenia) 183. helvetica (Peronespora) 39. Hemerocallidis (Beloniella) 1212. hemipteralis (Laboulbenia) 169. hemisphaerica (Dothidea) 628. hemisphaerica (Peziza) 1260. hemisphaerica (Clypeostroma) 628.

henkeliana (Herpotrichia) 978.

Henningsiana (Phyllachora) 564.

Henningsii (Meliola) 346.

Henrici (Entomophthora) 14.

hepaticola (Pleospora) 1025.

Heptapleuri (Lembosia) 492.

Heraclei (Protomyces) 1317.

Hervittiae (Meliola) 281.

herbariorum (Eurotium) 227.

herbarum (Pleospora) 1037.

Hermaeophagae (Dimeromyces) 69.
Hermaeophagae (Laboulbenia) 161.
Hermodactyli (Leptosphaeria) 997.
heroica (Laboulbenia) 178.
herpotrichioides (Melanopsamma) 810.
herpotrichioides (Trichosphaeria) 810.
Hesperidis (Peronospora) 49.
Hessii (Meliola) 342.
hetseriane (Phagagapara) 1004.

Hessii (Meliola) 342.
hetaerizans (Phaeospora) 1004.
heteracanthoides (Peroneutypa) 728.
heterachaeta (Acapthosticmo) 973.

heterochaeta (Acanthostigma)971 heterochaeta (Dasyscypha) 1204. heterocephala (Meliola) 304. Heteroceratis (Laboulbenia) 161. Heteroceri (Misgomyces) 144. heterodonta (Meliola) 356. heterosperma (Dictyothyriella) 523.

heterotricha (Erinella) 1217. heterotricha (Meliola) 292, 304. Heterotrichi (Guignardia) 787. Heterotrichi (Phyllachora) 596. Heveae (Eutypella) 718. Heveae (Guignardia) 782. Heveae (Meliola) 287. Heveae (Passalora) 919. Heveae (Phaeangella) 1232. Heveae (Sphaerella) 863. heveana (Pleonectria) 688. heveana (Sphaerella) 863. heveana (Xylaria) 1096. heveanum (Hysterium) 1117. hexandrus (Stigmatomyces) 119. hians (Asterina) 450.

Hibisci (Eutypa) 726. hibiscicola (Calonectria) 682. hibiscincola (Metasphaeria) 955. hiemalis (Coccomyces) 1269. hiemalis (Laboulbenia) 188.

hiemalis (Peronospora) 58. Hieracii (Sphaerella) 857. himalense (Rhytisma) 1265. Hippophaës (Cenangium) 1227. Hippophaës (Schizoxylon) 1253. hirsuta (Xylaria) 1103. hirsutula (Lentomita) 1071. hirtella (Xylaria) 1101. Hirtellae (Auerswaldia) 541. hirtula (Asteromyxa) 488. hirtula (Dimeriella) 488. hispalensis (Leptosphaeria) 997. hispanica (Guignardia) 785. hispanica (Lasiobotrys) 252. hispida (Lasiosphaeria) 1018. hispida (Lasiosphaeris) 1018. hispidum (Chaetoceratostoma) 1071. höhneliana (Calonectria) 582, Höhnelii (Merrilliopeltis) 916. Höhnelii (Oxydothis) 916. Holocalycis (Asterina) 457. Homalanthi (Sphaerella) 863. Homalotae (Monoicomyces) 94. Homophoëtae (Dimeromyces) 68 Homophoëtae (Laboulbenia) 176 Hopeae (Meliola) 283. hordicola (Sphaerella) 858. Horii (Sphaerella) 884. hormosiana (Lembosia) 493. horrida (Meliola) 357. horrida (Rosellinia) 834. horrida (Tastiella) 834. Hostae (Sphaerella) 876. Hottentottae (Laboulbenia) 163. houseana (Leptosphaeria) 989. Housei (Didymosphaeria) 934. Hoyae (Meliola) 271 Hoyae (Physalospora) 795. huberiana (Cordyceps) 699. huberiana (Nectria) 664. Hugoniae (Phyllachora) 595. Humphreyana (Pythiopsis) 23. Humuli (Peronoplasmopara) 63. huthiana (Leptosphaeria) 1000. hyalinospora (Amphisphaeria) 942. hyalinum (Lachnum) 1202.

hyalopus (Laboulbenia) 179.

hyalospora (Meliola) 362 Hydnocarpi (Asterinella) 481. Hydnoporus (Polystictus) 1323. Hydrocharidis (Beloniella) 1212. Hydrocotyles - asiaticae (Sphae. rella) 890. hydrophila (Sordaria) 845. Hyeronimi (Vizella) 1021. Hymanthophylli (Physalospora) 795. Hymenexidis (Urophlyctis) 22. Hycseridis (Protomycopsis) 1318. hyonina (Pithyella) 1169. Hypnorum (Belonioscypha) 1215. Hypnorum (Podobelonium) 1215. Hypeaspidis (Rickia) 82. hypodermia (Cryptosporella) 708 hypeleuca (Galactinia) 1161. bypoleuca (Nectria) 654. hypophylla (Echidnodes) 498. hopophylla (Oxydothis) 630. hypophylla (Scolecodothis) 630. hypoxyloides (Valsaria) 764. Hypoxylen (Xylaria) 1099. hyptidicola (Meliola) 297. hysterioides (Briardia) 1247. hystericides (Xyloma) 1257. Hystrix (Erinella) 1217. ibicuyensis (Hypocrea) 672, Ichnanthi (Phragmocarpella) 624. Ichnanthi (Roumegueria) 624. icositana (Leptosphaeria) 990. idiostoma (Laboulbenia) 161. ignobilis (Sphaerella) 866. Ikedai (Sphaerella) 888. Iliau (Gnomonia) 1073. Iliau (Melanconium) 1073. ilicicola (Sphaerella) 850. ilicina (Pleomassaria) 1047. ilicina (Titanella) 1047. Ilicis (Amerodothis) 539. llicis (Bagnisiella) 539. Hicis (Discochora) 638. Ilicis (Physalospora) 638. Ilicis (Pleosphaeria) 1053. llytheae (Stigmatomyces) 122. immersa (Physalospora) 807.

impatientina (Sphaerella) 852. Impatientis (Naevia) 1247. Impatientis (Pyrenopeziza) 1198. Imperatae (Massalongella) 775. Imperatae (Meliola) 293. Imperatae (Microthyrium) 424. Imperatae (Microthyrium) 431. Imperatae (Phyllachora) 579. imperspicua (Limacinia) 383. Implexae (Sphaerella) 854. implexicola (Sphaerella) 854. inaequale (Lophiotrema) 1108. inaequalis (Eriosphaeria) 922. inaequalis (Melanopsammella) 922.

inaequalis (Morenoina) 430. Inaghatahani (Butleria) 1134. incarnata (Barlaeina) 1168. incarnata (Caloscypha) 1168. incarnata (Clintoniella) 673. incisa (Asterina) 460. inclinata (Rickia) 78. inclusa (Rickia) 83. incompleta (Metasphaeria) 956. incompta (Meliola) 328. incomptus (Ophiobolus) 1066. inconspicua (Calosphaeria) 709. inconspicua (Coleroa) 400. inconspicua (Didymosphaeria) 936.

inconspicua (Erostella) 709. inconspicua (Eutypa) 727. inconspicua (Lembosia) 496. inconspicua (Pezizella) 1186. incrassans (Synchytrium) 17. incrustans (Odontia) 1323. incrustantis (Thyridaria) 769. incurvatus (Coreomyces) 151. indentatus (Stigmatomyces) 122. indiana (Sphaerella) 858. indica (Apiospora) 612. indica (Asterina) 473. indica (Cryptovalsa) 735. indica (Diplochorella) 632. indica (Dothidella) 632. indica (Leptosphaeria) 987. indica (Meliola) 300.

indica (Nummularia) 1086. indica (Ombrophila) 1237. indica (Peroneutypella) 730. indica (Peronospora) 59. indica (Phyllachora) 589. indicum (Capnophaeum) 384. indicum (Hypoxylon) 1083. indicum (Pseudophacidium) 1272 indicus (Pseudosaccharomyces) 1310. indicus (Tettigomyces) 86.

infectoria (Pleospora) 1038. insesta (Phyllachora) 607. infestans (Phytophthora) 35. inflatum (Hysterangium) 1327. inflatum (Sarcoxylon) 1085. inflatus (Chitonomyces) 91. inflatus (Stigmatomyces) 119. inflexa (Laboulbenia) 160. infossa (Didymosphaeria) 929. infuscata (Thaxteriola) 219. infuscatus (Dioicomyces) 103. infuscatus (Monoicomyces) 93. Ingae (Dimerosporium) 243. Ingae (Ophiodothella) 629. Ingae (Phyllachora) 629 Ingae (Thallochaete) 488. inigneum (Pyronema) 1162. inimica (Trabutia) 558. innata (Nectria) 661. innumerosa (Hendersonia) 1131. innumerosa (Monascostroma) 1131.

inornata (Chorostate) 748.
inornata (Diaporthe) 748.
inquinans (Asterula) 405.
inquinans (Ellisiodothis) 406.
insculpta (Vialaea) 708.
insidens (Celidium) 1298.
insidens (Leciographa) 1292.
insidians (Zoophagus) 32.
insigne (Ascostratum) 1135.
insignis (Asterina) 231.
insignis (Hypocrella) 694.
insignispora (Lamprospora) 1171
insitiva (Valsaria) 763.
insubrica (Peronospora) 58.

irradians (Tuber) 1152

insueta (Zignoella) 968. insulana (Leptosphaeria) 991. insulana (Sphaerella) 882. insularis (Didymosphaeria) 931. insulicola (Laboulbenia) 198. intermedia (Achlya) 26. intermedia (Amphisphaeria) 942 intermedia (Genea) 1147. intermedia (Hypocrea) 671. intermedia (Iulella) 1047. intermedia (Sphaerulina) 949. intermedia (Titanella) 1047 intermedium (Dimerium) 253. intermedius (Ceratomyces) 149. intermedius (Cucujomyces) 215. intermedius (Ecteinomyces) 142. intermedius (Mucor) 3. intermixta (Pleosphaerulina)1020 intermixta (Spaerulina) 1020. interrupta (Asterina) 1255. interrupta (Entopeltis) 394. intexta (Celidium) 1297 intricata (Asterina) 529. intricata (Meliola) 283. intricata (Plochmopeltis) 529. introversa (Rickia) 82. introversus (Chitonomyces) 90. Inulae (Pyrenopeziza) 1195. Inulae-candidae (Pleospora) 1028 inundatus (Protomyces) 1317 inventa (Nectria) 654. ipiranguensis (Sphaerella) 854. Ipomoeae (Comochlatris) 1040. Ipomoeae (Hypomyces) 675. ipomoeicola (Meliola) 279. Ipomoeae (Nectria) 675. Ipomoeae (Pyrenophora) 1040. Ipomoeae (Seynesia) 241,428. Ipomoeae (Sphaerella) 859. iquitosense (Trichothyrium) 507. iquitosensis (Meliola) 362. Iridis (Didymellina) 911. Iridis (Dothidea) 911. Iridis (Sphaerella) 911. Iridis (Sphaerella) 869. irradians (Asterina) 1132. irradians (Epipolaeum) 1132.

irregularis (Asterina) 476 irregularis (Halbanina) 476 irregularis (Karschia) 1280. irregularis (Meliola) 263 irregularis (Morenoëlla) 497 irritans (Guignardia) 778 isariphora (Scoptria) 708. Isatidis (Peronospora) 49 Ischaemi (Phyllachora) 580 Ischaemi (Phyllachora) 580. Ischnosiphonis (Trematosphaeria) 1012 istriaca (Guignardia) 787. italica (Leptosphaeria) 995. italicus (Amorphomyces) 100 italicus (Cantharomyces) 98. italicus (Chitonomyces) 89. italicus (Coreomyces) 151. italicus (Dioicomycea) 102. italicus (Parahydraeomyces) 91. italicus Stigmatomyces) 110. italicus (Stigmatomyces) 110. italicus (Thripomyces) 151 lvae (Dasyscypha) 1204. Ivae (Metasphaeria) 953. Ixorae (Meliola) 332. Ixcrae (Phyllachora) 602. jaapiana (Entomophthora) 14. iaapiana (Melomastia) 969. jaaplana (Peronuspora) 57. iaapianum (Synchytrium) 17. Jacaratiae (Asterina) 446. Jacobsoni (Rickia) 76. lacquemontiae (Otthiella) 922. Jacquiniae (Dimerina) 245. laczewskii (Sphaerella) 872. Jaczewskii (Taphrina) 1301. jamaicensis (Corynelia) 1105. jamaicensis (Lasiosphaeria) 796. jamaicensis (Stigmatomyces) 121 japonensis (Cordyceps) 700. japonica (Actinopelte) 530. japonica (Asterina) 451. japonica (Cudonia) 1157. japonica (Diatrype) 737. japonica (Haraea) 260.

iaponica (Hypocrea) 659. japonica (Leotia) 1234. japonica (Metameris) 551. japonica (Neopeckia) 944. japonica (Peroneutypella) 730. japonica (Phaeosphaerella) 925. japonica (Typhulochaeta) 226. japonica (Valsa) 714. japonica (Yoshinagella) 550. japonicum (Dimerium) 255. japonicum (Lachnum) 1202. japonicus (Monographus: 55). japonicus (Zygorrhynchus) 11. Jasmini (Guignardia) 789. Jasmini (Laestadia) 789. Jasmini (Metasphaeria) 959. jasminicola (Asterina) 464 jasminicola (Guignardia) 789. Jatrophae (Meliola) 288. Jatrophae (Phytophthora) 35. javanica (Dermatodothis) 625. javanica (Halbaniella) 503. javanica (Heterochlamys) 503. javanica (ljuhya) 666. iavanica (Sclerospora) 66. javanicum (Rhipidocarpon) 416. javanicum (Scutellum) 431. javanicus (Pseudosaccharomyces) 1308. javanus (Cryptandromyces) 213. javanus (Synandromyces) 107. Jeannelii (Humaria) 1167. Jeannelii (Pustularia) 1167. Jeannelii (Rhachomyces) 209. Jenseni (Pseudosaccharomyces) 1308. jodascum (Calothyrium) 439. Jodinae (Nectria) 653. Jodinae (Tubercularia) 653. Jörgenseni (Cookella) 1142. Jonaspidis (Phylasospora) 801. Jonaspidis (Thrombium) 801. juillardensis (Saccharomyces) 1305. jujuyensis (Laboulbenia) 196. Junci (Graphyllium) 1123. juncella (Pezizella) 1189.

Juglandis (Amerodothis) 539. Juglandis (Botryosphaeria) 539. Juglandis (Physalospora) 799. juncicola (Didymella) 905. Juniperi (Dothidea) 502. juniperi (Metacapnodium) 384. Juniperi (Seynesiella) 502. juniperinum (Capnodium) 383. Junodii (Diplocystis) 1326. juratensis (Pichia) 1312. juruana (Achorella) 548. juruana (Dothidea) 548. juruana (Trichothyriopsis) 507. juruanum (Trichothyrium) 507. Justiciae (Guignardia) 778. kajiana (Ditopella) 807. kamerunana (Rickia) 79. kamerunensis (Dimeromyces) 71. kamerunensis (Ilytheomyces) 125 kamerunus (Rhizomyces) 138. kariana (Didymella) 909. kasanensis (Rhizopus) 8. kaufmanniana (Saprolegnia) 25. Kawagoi (Polystomella) 408. Keissleri (Phaeodiaporthe) 768. Kellermanni (Basidiophora) 67. Kelseyi (Homostegia) 551. Kelseyi (Phragmodothella) 551. Kemneri (Protomyces) 1317. Kerneri (Didymosphaeria) 932. Kerneri (Polycoccum) 932. Kerriae (Coccomyces) 1269. Kerriae (Metasphaeria) 958. khandalensis (Amphisphaeria) 940. kilimandscharica (Cocconia) 549. kilimandscharica (Englerodothis) 549. klimandscharica (Parodiella) 252. kilimandscharica (Sordaria) 844. kirschsteiniana (Valsella) 716. klebsiana (Achlya) 27. Klöckerii (Debaryomyces) 1311. Kochiae (Peronospora) 41. kochiana (Eutypella) 717. Koelreuteriae (Uncinula) 225.

Kolowratiae (Phragmocauma) 621. kouh-cherrica (Fleospora) 1026. kouh-sefidica (Pleospora) 1031. kreuthensis (Protomyces) 1310. kriegeriana (Gnomoniella) 1069 kriegeriana (Phomatospora) 794. kriegerianus (Protomyces) 1316. Kriegerii (Belonidium) 1213. Krombholzii (Verpa) 1155. kurdica (Cucurbitaria) 1057. kurdistanica (Pleospora) 1030. Kusanoi (Cocchocora) 615. Kusanoi (Dothidella) 616. Labecula (Asterina) 508. Labecula (Trichopeltina) 508. laboulbenioides (Entomocosma) 220. Laburni (Eutypella) 719. Laburni (Helotiella) 1209. lacerum (Phacidium) 1258. Lacmobothrii (Trenomyces) 129. lachnoides (Mollisiopsis) 1194. lactea (Phyllachora) 591. Lacticae (Laboulbenia) 162. laeta (Meliola) 345. laevigata (Meliola) 267. Lafari (Pseudosaccharomyces) 1309. Lagari (Laboulbenia) 202. Lagarocerinus (Laboulbenia) 16? lageniformis (Sphaerella) 884. lagenoides (Leptosphaeria) 996 Lagerheimii (Taphrina) 1302. Laghbi (Saccharomyces) 1304. Lagunae (Phyllachora) 592. lagunense (Catacauma) 561. lagunensis (Diaporthe) 751. lagunensis (Eutypa) 727. lagunensis (Morenoëlla) 500. lagunensis (Ophionectria) 689. lagunensis (Phyllachora) 561. lagunensis (Sphaerella) 881. Laminariae (Hypoderma) 1123. laminariae (Ophiobolus) 1062. laminariana (Pleospora) 1024. laminariana (Rosellinia) 826.

lamprostoma (Nummularia) 1089 lamprostoma (Rosellinia) 935 lanaria (Mollisia) 1193. lanaria (Ophiobolus) 1063. lanata (Comochlatris) 1040. lanceclato-paraphysata (Pezizella) 1188. lanceolato-setosa (Meliola) 272. Langsbergi (Laboulbenia) 171. Lantanae (Agostaea) 1321. Lantanae (Meliola) 350. Lantanae (Perisporina) 263. Lantanae (Perisporium) 262. Lantanae (Pleospora) 1026. Lantanae (Trabutia) 1321. Lappae (Phialea) 1185. lapponica (Saprolegnia) 24. lapponica (Taphrina) 1302. laricina (Tympanis) 1230. Laricis (Hypodermella) 1257. Laserpitii (Protomyces) 1317. lasiana (Sphaerella) 851. Lasiochili (Stigmatomyces) 124. lasioderma (Dasyphthora) 651. lata (Eutypa) 725. lata (Taphrina) 1302, late-maculans (Gilletiella) 417. lateritium (Exosporium) 392. Lathonia (Leptosphaeria) 998. Lathropini (Laboulbenia) 162. lathropinicola (Laboulbenia) 186. Lathyri (Phyllachora) 592. Lathyri (Urophlyctis) 22. laticollis (Stigmatomyces) 116. latior (Rickia) 82. latissimum (Acrospermum) 1130. Lauraceae (Asteronia) 442. Lauraceae (Microthyrium) 3424. lauricola (Zukalia) 380. Lavagnei (Dimeromyces' 70. Lavagnei (Ilyomyces) 107. laxiuscula (Asterina) 471. Leandrae (Auerswaldia) 541. Leathsi (Laboulbenia) 170. Lebenis (Mycoderma) 1310. Lebenis (Saccharomyces) 1306. lecanodes (Nectria) 658.

Lecanorae (Merismatium) 1040. Lecanorae (Polyblastia) 1040. lecideopsoideum (Glonium) 1113. leciographoides (Melaspilea) 1283 Ledermannii (Balladyna) 372. Ledi (Aulographum) 437. Ledi (Coccomyces) 1267. Ledi (Pseudophacidium) 1256. Leguminum (Phyllachora) 591. lejostegia (Sphaeria) 1024. lejostoma (Stigmatomyces) 118. Lendneri (Saccharomyces) 1306 lenticularis (Lembosia) 403. lenticularis (Pseudolembosia))403 Lentisci (Dichlaena) 228. lentzkeana (Zignoella) 968. Leonardi (Laboulbenia) 205. Leonis (Propolis) 1245. Leonotodontis (Protomycopsis) 1318. leopoldina (Melibla) 354. leopoldensis (Phyllachora) 569. lepida (Laboulbenia) 194. Lepidii (Peronospora) 49. Lepidii (Peronospora) 47, 49 et 51 Lepidii sativi (Peronospora) 49. Lepidii virginici (Peronospora) 50. lepidioides (Laboulbenia) 194. lepidophilum (Celidium) 1297. lepidophilus (Abrothallus) 1297. lepidotricha (Asterinella) 486. lepisanthea (Meliola) 342. Leptaleae (Pharcidia) 895. leptidea (Meliola) 270. leptitana (Didymosphaeria) 935. leptocarpa (Eutypella) 719. leptochaeta (Lasiosphaeria) 975. leptochaeta (Meliola) 320. leptopus (Laboulbenia) 176. leptopus (Meliola) 354. leptosperma (Endodothella) 615. leptosphaerioides (Micropeltis) 517. leptospora (Herpotrichia) 978. leptosporum (Calothyrium) 439.

leptostamoides (Laboulbenia) leptotheca (Phyllachora) 585. leptosioma (Laboulbenia) 189. Leptotrachelae (Monoicomyces) 94. Le-Rati (Sarcosoma) 1234. Lesdaini (Mollisia) -1193. Lesdaini (Nectria) 660. Lesdaini (Nesclectria) 1193. Lesdaini (Phacopsis) 1295. Lespedezae (Pleospora) 1032. lethalis (Sphaerella) 873. Leucaenae (Amphisphaeria) 941. Leucaenae (Eutypella) 720. Leucaenae (Nectria) 658. Leucanthemi (Protomycopsis) 1318. Leucelenes (Pyrenophora) 1042. Leucophengae (Stigmatomyces) leucoptera (Melanochlamis) 401. leucopterum (Dictyothyrium) 513. leucostigmoides (Pezizella) 1189. leucostoma (Valsa) 714. Leucosykes (Meliola) 348. levissimum (Tuber) 1153. Lianae (Nummularia) 1088. lianincola (Hypoxylon) 1083. libera (Hypocrella) 693. lichenicola (Discocera) 1275. lichenoides (Anthostomella) 825. lichenoides (Melanopsamma) 92 i Lichenum (Pharcidia) 894. Lichtensteini (Laboulbenia) 156. Licualae (Ophiobolus) 1065. lignicola (Melomastia) 959. lignicola (Ophiochaeta) 1078. lignicola (Peroneutypa) 729. lignicola (Phacidium) 1261. lignicola (Sordaria) 847. lignicola (Thelebolus) 1218 lignorum (Chaetolentomita) 1072. Ligustici (Protomyces) 1317. ligustrina (Diaporthe) 757. ligustrina (Valsa) 713. lilacina (Ciboria) 1181.

limbalis (Metasphaeria) 952. limosa (Ombrophila) 1236. Limosinoides (Stigmatomyces) limpida (Calonectria) 679. linaricola (Urophlyctis) 22. lindaviana (Sphaerella) 891. Linderae (Valsaria) 763. Linderae (Didymosphaeria) 930. Lindneri (Endomyces) 1304. Lindneri (Pseudosaccharomyces) 1308. Lindneri (Saccharomyces) 1306. linearis (Echidnodella) 498. linearis (Morenoëlla) 498 linearis (Physalospora) 799. linearis (Rhytisma) 1256. linearis (Taphrina) 1303. lineolata (Eutypa) 726. lineolata (Eutypella) 719. lingulatus (llytheomyces) 126. lingulatus (Stigmatomyces) 123. linicola (Sphaerulina) 950. linitaria (Karschia) 1279. Linocierae (Meliola) 326. Liparidis (Asterina) 464. Lipeuri (Trenomyces) 129. Lispini (Misgomyces) 144. Lispini (Rickia) 77. litoralis (Peronospora) 39. Lithoiceae (Didymella) 905. Lithoiceae (Pharcidia) 907. litigiosa (Dothithyrella) 503. litigiosum (Microthyrium) 503. Litseae (Armatella) 409. Litseae (Asterina) 455. Litseae (Dimerosporium) 409. Litseae (Endodothella) 613. Litseae (Gnomonia) 1073. Litseae (Meliola) 298. Litseae (Venturia) 898. Litsurae (Aulographum) 498. Litsurae (Echidnodes) 498. Livistonae (Oxydothis) 917. Livistoniae (Meliola) 328. lobata (Asterina) 472. lobata (Discodothis) 1278.

lobulifera (Asterina) 454. loculosa (Teichospora) 1052. Lonchocarpi (Phyllachora) 592. longicollis (Stigmatomyces) 117. Longii (Lachnea) 1176. Longii (Sepultaria) 1176. longirostratus (Chitonomyces) 9! longirostratus (Stigmatomyces) longirostris (Endothia) 761. longisetosa (Venturia) 900. longisetum (Aithaloderma) 377. longispora (Gibberella) 686. longispora (Humaria) 1163. longispora (Meliola) 350. longispora (Phyllachora) 593. longisporae (Meliola) 282. longissima (Lembosia) 415. longissima (Monorhiza) 415. Longitarsi (Dimeromyces) 69. Lonicerae (Trabutia) 554. Lopadii (Müllerella) 816. lophiostomacea (Auerswaldia) 627. lophiostomacea (Homostegia) 627 Lophopetali (Asterina) 447. Loranthi (Asterinella) 482. Loranthi (Clypeolum) 487. Loranthi (Hariotula) 487. Loranthi (Sphaerella) 877. Loranthi (Synpeltis) 409. lcranthicola (Asterina) 457. Lortoni (Barlaeina) 1168. Lortoni (Plicaria) 1168. lortoniana (Zignoella) 966 lucens (Anthostomella) 823. lucens (Lembosia) 502. Lucumae (Meliola) 344. lugubris (Asterinella) 483. luitpoldina (Niptera) 1210. lumbricoides (Ecteinomyces) 142. Lunariae (Peronospora) 50 lusitanica (Henriquesia) 1112. lusitanica (Lecidea) 1293. lusitanica (Tryblidaria) 1293. lusitanica (Urnula) 1224. lusitanicus (Mucor) 1.

lussoniense (Dimerosporium) 244. lussoniensis (Didymella) 905. lussoniensis (Leptosphaeria) 980. lutea (Sordaria) 847. luteola (Humaria) 1163. lutescens (Coccomyces) 1270. lutescens (Cylindrosporium) 1270 lutescens (Laboulbenia) 157. luticola (Lasiosphaeria) 847 lutziana (Lamprospora) 1171. luxurians (Paranectria) 684. luxurians (Olpidiopsis) 16. luzonensis (Asterinella) 480. luzonensis (Daldinia) 1086. (Dimerinopsis) 917. luzoniensis luzonensis (Lembosia) 495. luzonensis (Meliola) 286. luzonensis (Xylaria) 1100. luzonica (Linhartia) 1211. lychnidicola (Sphaerella) 856. Lycopersici (Nematospora) 1314. Lycopodii (Pleospora) 1035. Lycopodinae (Rickia) 84. Lycopsidis (Pyrenopeziza) 1198. Lythri (Pyrenopeziza) 1198.

Mabae (Dothidella) 571. Mabae (Phyllachora) 571. Macarangae (Meliola) 288. Macherii (Coccostroma) 540. Machaerii (Phyllachora) 540. Machaerii (Physalospora) 801. Maclurae (Eutypella) 721. Macleyae (Sphaerella) 882. Macounii (Belonidium) 1213. Macounii (Chorostate) 750. Macounii (Metasphaeria) 959. Mac-Owaniana (Asterina) 235. Mac-Owaniana (Meliola) 235. Mac-Owaniana (Parenglerula)235 macrandrus (Stigmatomyces) 108. macrasca (Tapesia) 1199. macrocera (Laboulbenia) 171. macrochaeta (Meliola) 352. macromera (Micropeltis) 514. macropunctata (Eutypa) 728. macropus (Corethromyces) 132.

macropus (Herpomyces) 99. macrosperma (Parapeltella) 503. macrosperma (Pseudovalsa) 1016 macrospora (Corynelia 1105. macrospora (Pharcidia) 894. macrospora (Plasmopara) 64. macrospora (Sclerospora) 65. macrosporangia (Apodachlya) 29 macrosporella (Didymosphaeria) 927. macrosporella (Massariopsis) 927 macrosporum (Fusicladium) 919. macrosporum (Microphyma) 1138 macrosporus (Protomyces) 1317. macrostegia (Cleistosphaera) 238. macrothelis (Lachnea) 1174. macrotrichus (Lasiobolus) 1220. maculans (Didymosphaeria) 932. maculans (Metasphaeria) 957. maculans (Taphrina) 1303. maculare (Lophodermium) 1125. macularis (Trichosphaeria) 809. maculicola (Phyllachora) 566. maculicola (Venturia) 900. maculosum (Dothidasteroma) 411 maculosum (Rhytisma) 411. madeirensis (Urnula) 1224. Maesae (Meliola) 324. magellanicus (Cantharomyces) 96 magnifica (Asterina) 509. magnifica (Geopora) 1149. magnifica (Neopeckia) 945. magnifica (Ustulina) 1094. magnificum (Pycnocarpon) 509. magnificus (Ascobolus) 1221. Magnoliae (Meliola) 311. Magnoliae (Pleospora) 1035. Magnolii (Leptosphaeria) 996. magnusiana (Kamularia) 665. Magnusii (Exobasidium) 1325. Maideni (Hymenogaster) 1327. maireana (Lamprospora) 1170. Mairei (Galactinia) 1161. Mairei (llyomyces) 107. major (Apodachlya) 29. major (Cenangium) 1227. major (Ecteinomyces) 141.

major (llyteomyces) 126. major (Laboulbenia) 186. major (Meliola) 282, 283. major (Mollisia) 1191. malabarensis (Asterina) 444. malabarensis (Phyllachora) 576. malacensis (Meliolina) 351. malacotricha (Meliola) 282, malajanus (Pseudosaccharomyces) 1308. Mali (Botryosphaeria) 812. Mali (Diaporthe) 754. Mali (Sclerotinia) 1181. Mali (Valsa) 713. Malloti (Eutypella) 718. Malloti (Phaeosaccardinula) 385. Malloti (Phaeosaccardinula) 385. mammiforme (Hypoxylon) 1084. manacensis (Cirsosia) 497. manaosensis (Lembosia) 497. manaosensis (Meliola) 362. manaosensis (Mendogia) 418. mandaquiensis (Asterina) 461. Mangiferae (Rosellinia) 826. Mangiferae (Rosellinia) 1018. Mangini (Melanospora) 649. Mangini (Saccharomyces) 1306. mangostoma (Meliola) 295. Manihoti (Guignardia) 783. Manihotis (Ophiobolus) 1063. Manobiae (Laboulbenia) 163. manubriolata (Laboulbenia) 169. manubriolatus (Chitonomyces) 90 manubriolatus (llytheomyces) 126 manshurica (Peronospora) 40, 56 manshuriae (Peronospora) 39. Mapaniae (Meliola) 282. maquilingensis (Phyllachora) 566 maquilingiana (Briardia) 1247. maquilingiana ((Conomela) 835. maquilingiana (Meliola) 335. maquilingiana (Micropeltella) 521 maquilingiana (Phaeoscutella)536 maquilingiana (Rosellinia) 835. maquilingiana (Trematosphaeria) 1012. maquilingianum (Catacauma) 563

maquilingianus (Ophiobolus) 1065 maquilingica (Nectriella) 642. Marantae (Leptosphaeria) 987. marasmoides (Xylaria) 1099. Marattiacearum(Stigeosporium) 38 Marconii (Botryosphaeria) 812. Marcgraviae (Meliola) 314. marginalis (Ceratomyces) 149. marginata (Laboulbenia) 160. marginata (Ophiodothis) 553. marginata (Rickia) 80. marginata (Trichochora) 553. marginatum (Hypoxylon) 1084. Mariae (Phialea) 1185. maricaensis (Meliola) 269. marina (Laboulbenia) 157. maritima (Pharcidia) 895. maroccana (Laboulbenia) 197. maroccana (Sphaerulina) 949. Marrubii (Synchytrium) 18. Massarae (Anthostoma) 746. Massarae (Lopadostoma) 746. massariana (Leucostoma) 708. massariospora (Clypeosphaeria) 1018 masseea (Patellaria) 1286. mastoidea (Rosellinia) 832. Matiaiae (Leptosphaeria) 994. Matisiae (Leptosphaeria) 994. matritensis (Leptosphaeria) 985. matritensis (Sphaerella) 866. Matthiolae (Peronospora) 50. Matthiolae (Sclerotinia) 1178. Matthiolae (Sphaerella) 859. Matthiolae annuae (Peronospora) 50. mattirolianum (Glonium) 1112. mattiroliana (Melanospora) 649. mattogrossensis (Laboulbenia) 180. Maublancii (Asterina) 460. Maublancii (Lembosia) 494. Maupasii (Protascus) 15. maura (Patellaria) 1286. maxima (Micropeltella) 522. maxima (Pilocratera) 1173. maxima (Sphaerella) 884.

maximus (Cryptomyces) 1259. Maxoni (Acrospermum) 1129. mayaguesiana (Meliola) 334. Maydis (Acerbia) 1059. Maydis (Cladochytrium) 20. Maydis (Peronospora) 66. Maydis (Physoderma) 20. Maydis (Sclerospora) 66. Mayepeae (Meliola) 327. Mayepeae (Phyllachora) 601. mayepeicola (Meliola) 327. media (Amphoropsis) 218. media (Peronospora) 39. media (Pleospora) 1029. media (Taphrina) 1301. Medinillae (Balladyna) 234. Medinillae (Englerula) 234. Medinillae (Guignardia) 787. Medinillae (Laestadia) 787. Medinillae (Thrauste) 234. mediocris (Parapeltella) 503. medium (Melanomma) 1010. Medonis (Corethromyces) 132. megale (Diatrype) 738. megalocarpa (l'eichospora) 1050 megalopoda (Meliola) 357. megalopotamicum (Pyronema) 1162.

megalosoma (Eutypa) 728. megalospora (Eurotium) 227. megalospora (Meliola) 362. megalospora (Ombrophila) 1235, 1236.

megalosperma (Rosellinia) 832. megalosporum (Anthostoma) 744 megalotheca (Amphisphaeria) 940.

megasperma (Bremiella) 63. megasperma (Micropeltella) 521. megasperma (Peronospora) 63. megaspora (Verrucaria) 786. megastroma (Phyllachora) 577. Megisthoni (Rickia) 79. meizospora (Pharcidia) 895. melaena (Chorostate) 751. melaena (Hypocrella) 692. melaleucum (Hysterium) 1256. melanocerus (Autoicomyces) 147. melanocinctus (Cryptodiscus) 1249 melanomera (Asterina) 443. Melanophthalmae (Rickia) 77. melanopus (Cucujomyces) 214. melanospila (Mycobilimbia) 1289. melanospora (Stricheria) 1050. melanospora (Teichospora) 1050. melanospora (Aulographum) 437.

Melastomacearum (Phyllachora) melastomata (Munkiella) 609. melastomata (Munkiodothis) 609 Melastomatis (Pezicula) 1194. Melastomatum (Lembosia) 494. Meliae (Didymosphaeria) 933. Meliae (Phyllachora) 597. Melicae (Leptosphaeria) 983. Meliloti (Pyrenophora) 1044. Meliolae (Epinectria) 657. Meliolae (Nectria) 657. Meliolae (Perisporium) 261. meliolicola (Chaetosphaeria) 1014 meliolicola (Coryne) 1242. meliolicola (Nectria) 651. meliolicola (Paranectria) 684. melioloides (Parodiopsis) 391. melioloides (Trichobelonium) 1215.

Meliosmae (Phyllachora) 603.
melitensis (Metasphaeria) 954.
melleolaris (Dioicomyces) 105.
mellea (Hypocrea) 669.
mellea (Hypocrea) 669.
mellis - acidi (Zygosaccharomyces) 1313.

Melodori (Balladyna) 372.
Melonis (Sphaerella) 859.
Melongenae (Phytophthora) 36.
Memecyli (Chaetoplaca) 531.
Memecyli (Coccomyces) 1268.
Memecyli (Hyponectria) 643.
Memecyli (Meliola) 314.
Memecyli (Morenoëlla) 498.
memorabilis (Nummularia) 1090.
Menispermacearum (Didymella) 908.

Mereschkowskyi (Plowrightia) 543 Meronevae (Dimorphomyces) 73. Merremiae (Meliola) 280, Merrillii (Dasyscypha) 1205. Merrillii (Hypoxylon) 1079. Merrillii (Lasiostemma) 248. Merrillii (Melanopsamma) 921. Merrillii (Meliola) 352. Merrillii (Micropeltella) 519. Merrillii (Nummularia) 1091. Merrillii (Rosellinia) 837. Merrillii (Sphaerella) 880. mesomorpha (Laboulbenia) 170. mesopotamica (Pleospora) 1029. Metastelmae (Phyllachora) 567. Metzgeriae (Pseudonectria) 641. Menziesi (Calycella) 1190. Meuriesii (Discinella) 1190. Meuriesii (Pezizella) 1190. mexicana (Englerula) 230. mexicana (Phyllachora) 596. mexicana (Taphrina) 1302. Micheliae (Phyllachorella) 607. Miconiae (Asterina) 459. Miconiae (Auerswaldia) 541. Miconiae (Boringuenia) 702. Miconiae (Catacaumella) 564. Miconiae (Hyalosphaera) 702 Miconiae (Meliola) 315. Miconiae (Paranectria) 684. Miconiae (Phyllachora) 564. miconiicola (Lembosia) 494. miconiicola (Meliola) 316. miconiicola (Phyllachora) 597. micrandus (Stigmatomyces) 122. micraspis (Anthostomella) 817. microcarpa (Lembosia) 494. microcenta (Phyllachora) 562. microcentum (Catacauma) 562. microdisca (Ellisiodothis) 407 micromera (Meliola) 350. micromera (Stephanotheca) 433. microscopica (Lecidea) 1211. microscopica (Morenoëlla) 502. microscopica (Niptera) 1211. microsperma (Micropeltella) 522.

microspora (Asterina) 446. microspora (Cryptovalsa) 734 microspora (Humaria) 1165 microspora (Kretzschmaria 1085 microspora (Lembosia) 494 microspora (Meliola) 332. microspora (Meliola) 314. microspora (Nectria) 654. microspora (Phyllachora) 568. 583 microspora (Parodiella) 251. microspora (Rosellinia) 833. microsporium (Helotium) 1182. microsporium (Hydnangium)1328 microsporium (Microphyma) 1138 microstictica (Didymosphaeria) 932. microstroma (Diatrype) 736, 740. microteles (Puiggarina) 608. microtricha (Meliola) 322. migrans (Phomatospora) 794. Mikaniae (Gibbera) 250. millespora (Philocopra) 848. Milletiae (Meliola) 304. mindangense (Dimerosporium) 918 mindanaensis (Dimerinopsis) 918 mindorense (Melanomma) 1010. mindorensis (Anthostomella) 820 minium (Cercidospora) 894. minima (Cudoniella) 1156. minima (Peronospora) 59. minima (Pharcidia) 894. minoensis (Diatrype) 737. minoensis (Sphaerella) 883. Minor (Clithris) 1271. minor (Diatrype) 740. minor (Hysteropatella) 1119. minor (Lophiotrema) 1106. minor (Meliola) 305. minor (Mucor) 1. minor (Pharcidia) 894. minor (Rhizopus) 8. minor (Rosellinia' 827. minor (Sclerotinia) 1178. minor (Thyridaria) 769. minor (Tryblidiella) 1119.

minus (Odontotrema) 1259 minuscula (Betryosphaeria) 814. minuscula (Laboulbenia) 198. minusculus (Ceraiomyces) 139. minusculus (Ilytheomyces) 126. minuscula (Sarcoscypha) 1172. minuta (Amphoropsis) 218. minuta (Diaporthe) 757. minuta (Physalospora) 802. minuta (Poronia) 1095. minutelloides (Didymosphaeria) 934.

minutispora (Diatrypella) 741. minutissima (Naevia) 1258. minutula (Valsa) 712. mirabilis (Anthostomella) 818. mirabilis (Asterocalyx) 1243. mirabilis (Calopeziza) 1216. mirabilis (Kriegeriella) 432. mirabilis (Laboulbenia) 206. mirabilis (Plenophysa) 1320. miscanthea (Anthostomella) 819. Miscanthi (Phyllachora) 580. Miscanthi (Pleospora) 1030. Mischanthi (Sclerospora) 65. Mischocarpi (Mycrothyrium) 426 Missionum (Laboulbenia) 189. mississippiensis (Endothia) 760. Mitragynes (Meliola) 333. mixta (Saprolegnia) 24. miyakeana (Leptosphaeria) 999. Miyakei (Microdiplodia) 999. modesta (Lembosia) 492. Modiglianii (Laboulbenia) 174. moelleriana (Rosellinia) 835. Möhringiae (Chatarinia) 1021. molleriana (Phragmothyriella) 528.

Mollinediae (Meliola) 321. Mollinediae (Morenoëlla) 501. mollis (Lasiosphaeria) 975. Molluginis (Amerodothis) 539. Molluginis (Bagnisiella) 539. mollispora (Humaria) 1162. Momordicae (Asterina) 449. monensis (Dimerina) 245. monensis (Meliola) 336.

Monocestae (Laboulbenia) 163. Monocrepidii (Laboulbenia) 163. monoica (Saprolegnia) 24. monosporum (Rhizophidium) 19. monosticha (Melanopsamma) 920 monosticha (Metasphaeria) 959. monotheca (Asterina) 479. monotheca (Questieria) 479. monspeliensis (Leciographa) 1292 montana (Leptosphaeria) 985. montana (Seunesia) 508. montana (Sphaerella) 887. montana (Sporormia) 1015. montana (Trichopeltella) 508. montana (Trichopeltis) 508. montellica (Saccardoella) 963. montenegrina (Micronectria) 691. montevidensis (Laboulbenia) 179 montevidensis (Stigmatomyces) 121

montivaga (Didymella) 910. moravica (Chryptosphaeria) 732. moravica (Coronophora) 708. moravica (Cucurbitaria) 1055. moravica (Cucurbitariella) 837. moravica (Didymosphaeria) 929 moravica (Herpotrichia) 978. moravica (Herpotrichiella) 974. moravica (Keisslerina) 1265. moravica (Quaternaria) 710. moravica (Stigmatea) 397. morchelliformis (Xylaria) morchelloides (Verpa) 1155. Mori (Dermatea) 1225. Mori (Didymella) 908. Mori (Dimerium) 255. Mori (Massaria) 1005. Mori (Ustulina) 1093. moricola (Massaria) 1006. morionicola (Laboulbenia) 203. Morionis (Laboulbenia) 203. morthieriana (Ombrophila) 1235. Mouririae (Phyllachora) 597.

mucida (Spragneola) 1156. mucosa (Dictyothyriella) 524.

mucosa (Micropeltis) 524.

Mucunae (Sphaerella) 873.

Mühlenbergiae (Leptosphaeria) 983 muiriana (Laboulbenia) 165. Mulgedii-alpini (Sphaerella) 857. Mülleri (Niptera) 1211. Mülleri (Phacopsis) 1211. Mülleri (Pseudosaccharomyces) 1307. multicuspidata (Cyathiank) 1104.

multicuspidata (Cyathicula) 1194 multiseptata (Lasiosphaeria) 976. multivalve (Xyloma) 1259. muralis (Peronospora) 41. muriperda (Mucor) 2. Musae (Guignardia) 788. Musae (Podospora) 847. Musae (Scolecotrichum) 794. Musae (Sordaria) 847. Musae (Sphaerella) 879. Musarum (Chaetothyrina) 370. Musarum (Glomerella) 794. Musarum (Gloecsporium) 794. Muscariae (Laboulbenia) 168. muscicola (Nectria) 663. muscorum (Sclerotinia) 1180. Mussaendae (Meliola) 333. mutilata (Leciographa) 1292. mvcophaga (Dermatea) 1226. Mycopron (Sphaerella) 873. myocoproides (Asterina) 476. myocoproides (Puiggarina) 608. myocoproides (Wardina) 476. Myricariae (Tympanis) 1230. Myriophylli (Cladochytrium) 21. Myriophylli (Physoderma) 21. Myrsinacearum (Meliola) 323. Myrtaceae (Aulographum) 437. Myrtacearum (Causalis) 1262. Myrtacearum (Maublancia) 487. Myrtacearum (Pseudorhytisma) 1262.

Myrtilli (Podosphaera) 223. myrtillinoides (Pezicula) 1194. myrtincola (Rehmiodothis) 610. myrtincola (Dothidella) 610. Myrtorum (Hysterostroma) 413.

Nadsonii (Zygosaccharomyces)

nantoensis (Zukalia) 381. naplochaeta (Meliolina) 362. Nappevana (Pyrenopezizopsis) 1198 narbonensis (Peronospora) 56. Narcissi (Cladochytrium) 20. Narcissi (Physoderma) 20. Nardui (Stictis) 1252. Nashi (Leptosphaeria) 999. Nashi (Leptosphaerella) 999. Nastri (Ocellaria) 1244. Nasturtii aquatici (Peronospora) 50. Nasturtii montani (Peronospora) 51.

natalensis (Meliola) 358. natilitia (Sordaria) 845. natans (Sphaeria) 548. natans (Systremma) 548. neapolitanus (Parahydraeomyces) 92.

Nebriae (Entomophthora) 14.
necator (Cordyceps) 700.
necator (Uncinula) 224.
Nectandrae (Guignardia) 785.
Nectandrae (Phyllachora) 587.
neglecta (Endogone) 1319.
Nemopanthis (Tympanis) 1226.
nemorea (Lachnea) 1175.
neo - guineensis (Laboulbenia)

neo - guineensis (Laboulbenia) 172. Neolitseae (Asterina) 456. neomexicana (Phyllachora) 596. Nepetae (Diaporthe) 752. Nepetae (Pleospora) 1037. Nepenthidis (Phyllachora) 601. Nephelii (Irene) 359.

Nephelii (Meliola) 359. Nephrodii (Botryosphaeria) 811. Nephromae (Leciographa) 1291. nervicida (Phyllachora) 588. nervincola (Rostronitschkea) 776. nervisequens (Phyllachora) 556. nervisequens (Trabutia) 556. nervisequia (Dothidella) 415.

nervisequia (Dothidella) 415. nervisequia (Lembosia) 493.

nerviseguia (Microcyclella) 544. nerviseguia (Monorhiza) 415 nervisequia (Polystomella) 544. nerviseguia (Sclerotinia) 1179. Nesleae (Peronospora) 51. neurophilum (Epiphyma) 239. Nicotianae (Phytophthora) 35, 36. Nideri (Conida) 1296. nidificans (Balansia) 696. nidulans (Pleospora) 1028. niegusensis (Pleospora) 1032. nigerrima (Coniochaeta) 826. nigerrima (Rosellinia) 826. nigerristigma (Sphaerella' 883. nigra (Botryochora) 542. nigra (Bresadolella) 683. nigra (Megalonectria) 542. nigra (Meliola) 277. nigrescens (Didymella) 901. nigrescens (Rickia) 83. nigrella (Diaporthopsis) 708. nigrificans (Clypeosphaeria)1007. nigricans (Leptosphaeria) 981, 982.

nigricans (Rhizopus) 8.
nigriseda (Pleospora) 1038.
nigripes (Autophagomyces) 212.
nigrofimbriata (Rickia) 83.
nigromaculatus (Ophiobolus) 1066.
nigromaculatus (Plejobolus) 1066.
nigromarginata (Thaxteriola) 219.
nigro-papillata (Bombardia) 846.
nigro-papillata (Sordaria) 846.
nigro-refuscens (Meliola) 274.
nigro-rufescens Teramni (Melio-

la) 309.
nigro-viridula (Massarina) 962.
nigrotecta (Metasphaeria) 952.
nipponensis (Corynelia) 1104.
nipponicum (Catacauma) 562.
Nisotrae (Ceraiomyces) 140.
nitens (Catacauma) 564.
nitens (Melanopsamma) 920.
nitens (Phyllachora) 567.
nitens (Stigmatula) 564.
nitida (Melanopsamma) 810.
nitida (Trichosphaeria) 810.

nitidula (Physalospora) 796. nitidus (Ascobolus) 1223. nivalis (Calonectria) 681. nivea (Plasmopara) 65. nivea (Tapezia) 1199. niveus (Paurocotylis) 1320. nobilis (Zignoella) 967. Nodostomae (Laboulbenia) 164. nodulariformis (Dermatea) 1226. nodulifera (Asterina) 467. nodulosum (Pycnocarpon) 510. normandina (Gloniella) 1114. notabilis (Amphisphaeria) 943. notha (Cytosporina) 815. notha (Harpostroma) 815. notha (Leptosillia) 815. Notiphilae (Stigmatomyces) 118. Notiophili (Laboulbenia) 155. novo-guineense (Sarcosoma)1234 novo-guineensis (Pilocratera)1 173 novo-guineensis (Trabutia) 558. nubecula (Asterina) 529. nubecula (Stomiopeltella) 529. nucleata (Trochila) 1262. nuda (Asterella) 243. nudipes (Microglossum) 1156. nudus (Cryptopus) 243. numidicus (Cantharomyces) 97. nummularioides (Anthostomella) 822. nummularioides (Hypoxylon)

nutans (Hypocrella) 695.

nutans (Mölleriella) 695.

nutans (Rickis) 80

nutans (Rickia) 80. Nyctaginearum (Phyllachora) 544 Nycteribiidarum (Stigmatomyces) 124.

Nycticali (Asterina) 445.

oahuensis (Haplophyse) 1120. obcordata (Rickia) 78. obducens (Nematostigma) 973. obesa (Asterinella) 479. obesa (Meliola) 340. obesula (Laboulbenia) 183. obesula (Meliola) 340.

obesus (Ceraiomyces) 140. oblongispora (Phyllachora) 571. obliqua (Massarinula) 913. obliqua (Rhamphoria) 1077. obliqua (Teichospora) 1077. oblongula (Botryosphaeria) 811. obtecta (Anthostomella) 818. obtusum (Hysterangium) 1327. obtusus (Ilvtheomyces' 127. Ocaleae (Monoicomyces) 93. occidentalis (Pseudosaccharomyces) 1309. occulta (Leptosphaeria) 982. occulta (Macrodiaporthe) 748. occulta (Melanconis) 748. occulta (Sphaerella) 861. occulta (Tapesia) 1199. oceanica (Bagnisiella) 540. oceanica (Phyllachorella) 607. ocellata (Achlya) 26. Ochlandrae (Rhopographella.) 623. Ochnae (Phyllachora) 606. ochraceum (Secotium) 1326. Ochtherae (Stigmatomyces) 123. Octheroideae (Stigmatomyces) 122. Ocoteae (Catacauma) 559. Ocoteae (Cryptobasidium) 1325. Ocoteae (Meliola) 298. ocoteicola (Meliola) 299 ocoteicola (Phyllachora) 587. octophragmia (Leptosphaeria) 993. octospora (Meliola) 363. octospora (Valsa) 710. oculata (Sphaerella) 892. Odoratae (Gnomonia) 1072. Oedionychi (Laboulbenia) 164. Oedipus (Chitonomyces) 90. oedipus (Coreomycetopsis) 221. oedipus (Laboulbenia) 189. oedistoma (Ophiobolus) 1067. ohuanensis (Haplophyse) 1256. Oidium (Peristomium) 229. Oleae (Massarinula) 913. oleifolia (Dothidea) 549.

oleifolium (Perischizon) 549. oligocarpa (Asterina) 463. oligomera (Meliola) 347. cligomera (Pleospora) 1039. oligospora (Didymella) 902. oligospora (Megalonectria) 689. oligosporum (Microthyriolum) 442 oligotricha (Caudella) 438. eligotricha (Neohoenelia) 375. oligotrichus (Lasiobolus) 1220. Olistopi (Laboulbenia) 199. olivetorum (Tryblidiella) 1118. Olivieri (Guignardia) 786. Olivieri (Laestadia) 786. Olyrae (Dimeriella) 248. omphaledes (Benguetia) 1208. embrophilacea (Pezizella) 1188. Onagrae (Leptosphaeria) 988. oncogona (Laboulbenia) 183. Onobrychidis (Diachora) 592. Onobrychidis (Physalospora) 646 Onobrychidis (Physalosporina) 646. ontariensis (Pezizella) 1189. ontariensis (Sphaerella) 873. Onthofagi (Rickia) 80. oodes (Calonectria) 683. Oodis (Laboulbenia) 170. opaca (Asterina) 470. opaca (Meliola) 264. operculata (Sphaerella) 864. Ophioglossae (Amorphomyces) 101 Ophitis (Corethromyces) 133. Ophoni (Laboulbenia) 198. Ophiuri (Phyllachora) 581. Opiliae (Meliola) 327. opposita (Asterina) 461. opposita (Meliola) 318. Opuntiae (Saccharomyces) 1305. orbicula (Darwiniella) 550. orbicula (Elmerococcum) 550. orbicula (Phyllachora) 575. orbiculare (Trichothyrium) 505. orbicularis (Hypocrella) 695. orbicularis (Lachnella) 1200.

orbicularis (Myriangella) 1255. orbicularis (Phragmothyriella) 528.

orbiculata (Dothidasteromella)

orbiculata (Leptocrea) 645. orbiculata (Seynesia) 428. orbiculata (Valsonectria) 667. orbiculatum (Hvsterostoma) 413. Orchidearum (Nectria) 652. orchnodes (Didymella) 901. orechtochilicola (Laboulbenia) 173.

oreophila (Patellea) 1277. orientalis (Cudonia) 1158. orientalis (Cantharomyces' 95. orientalis (Corethromyces) 134 orientalis (Rhachomyces) 209. Origani (Chaetopyrena) 961. Origani (Metasphaeria) 961. ornatus (Misgomyces) 144. Ornithogali (Physoderma) 21. ortalidanus (Stigmatomyces) 118, Oryzae (Sclerospora) 65. orvzeti (Sordaria\ 846. oryzina (Leptosphaeria) 996. oryzinus (Ophiobolus) 1064. Oryzopsidis (Phyllachora) 581. Osbeckiae (Dothidella) 610. Osbeckiae (Rehmiodothis) 610. Oscinosomalis (Dimeromyces) 71 Osmanthi (Meliola) 330. osorianus (Scelophoromyces) 215 Ostrvae (Mamiania) 567, 1070. Ostryae (Phyllachora) 567. Ostryae (Phyllachora) 1070. Othophorae (Meliola) 291. ovalispora (Humaria) 1167. ovalispora (Pulvinula) 1167. ovata (Bremia) 62. ovina (Dasyscypha) 1203. ovina-vagans (Lasiosphaeria) 847 ovoidea (Zignoëlla) 503. Oxycedri (Didymascella) 1263. oxyspora (Leptosphaeria) 995. oxysporiza (Nesolectria, 1274. Oxytropidis (Peronospora) 56.

pachyasca (Sphaerella) 886. pachydermata (Calosphaeria)709 pachydermica (Laboulbenia) 179 Pachylophi (Laboulbenia) 165. Pachysandrae (Cyclodothis) 633. pachystoma (Laboulbenia) 175. pachytheca (Leptosphaeria) 989. pachythelica (Laboulbenia) 206. pacifica (Leptosphaeria) 997. padicola (Diaporthe) 754. paetensis (Micropeltella) 520 Pahudiae (Phvllachora) 593. Pakuri (Dothidella) 546. Palaguii (Trematosphaeria) 1018. palawanense (Aulacostroma) 402 palawanensis (Amphisphaeria) 941

palawanensis (Asterinella) 484. palawanensis (Meliola) 333. palawanensis (Stigmatodothis) 400.

Paliuri (Cryptovalsa) 734.
Paliuri (Eutvpella) 721.
pallescens (Rickia) 83.
pallida (Melanconiella) 762.
pallida (Rickia) 83.
pallida (Xylaria) 1100.
pallidispora (Melomastia) 969.
pallidispora (Trematosphaeria) 969.

pallidus (Corethromyces) 134. pallidus (Dicicomyces) 103. pallidus (Geopyxis) 1159. pallidus (Hypomyces) 674. pallidus (Mucor) 1. pallidus (Rhachomyces) 209. Palmae (Sphaerella) 881. Palmarum (Asterina) 411. Palmarum (Bagnisiella) 539. Palmarum (Catabotrys) 539. Palmarum (Myxothecium) 411. Palmarum (Nemacyclus) 1254. Palmarum (Ophionectria) 690. Palmarum (Rhopographina) 625. Palmarum (Rhopographus) 625. Palmarum (Scolionema) 411. palmicola (Auerswaldia) 541.

palmicola (Catacauma) 564.
palmicola (Dermatea) 1225.
palmigena (Botryosphaeria) 540.
palmigenum (Coccostoma) 540.
palmincola (Curreyella) 637.
palmincola (Hyalocurreya) 637.
palmivora (Phytophthora) 36.
palmivorum (Pythium) 36.
paludosa (Laboulbenia) 164.
palustris (Laboulbenia) 177.
palustris (Peronospora) 62.
pampaniniana (Leptosphaeria) 984.

Panacis (Sclerotinia) 1177. panamensis (Ilytheomyces) 126. Pandani (Asterina) 495. Pandani (Auerswaldia) 540. Pandani (Clithris) 1271. Pandani (Ellisiodothis) 407. Pandani (Lembosia) 495. Pandani (Linospora) 1078. Pandani (Linocarpon) 1078. Pandani (Myiocopron) 422. pandanicola (Didymella) 909. Panesthiae (Herpomyces' 100. Panici (Ophiobolus) 1064. Panici (Otthia) 946. Panici (Phialea) 1185. Panici (Telimena) 623. nanicicola (Meliola) 293. Panici-sulcati (Phyllachora) 583. nannosa (Sphaerotheca) 1333. Paolii (Exarmidium) 622. papillata (Asterina) 446. papillata (Melanospora) 648. papillifera (Irene) 358. papillifera (Phaeodimeriella) 257 papilloideo-septata (Anisomyces) 765.

papilloideo-septata (Dothidea) 765.

papuana (Laboulbenia) 163. papuana (Rickia) 83. papuanus (Stigmatomyces) 118. papulosa (Metasphaeria) 952. papyracea (Nummularia) 1091. paradoxa (Achlya) 27. paradoxa (Colletomanginia) 650. paradoxa (Laboulbenia) 207. paradoxa (Saprolegnia) 25. paraënse (Cenangium) 1229. paraënsis (Eutvpella) 724. paraënsis (Ophiobolus) 1067. paraënsis (Zukalia) 379. paraguariensis (Leptosphaeria) 980.

paraguaya (Eutvpa) 1336. paraguayensis (Laboulbenia) 171. paraguayensis (Lophidiopsis) 1337.

paraguayensis (Microphiodotis) 629.

paraguayensis (Ophiodotis) 629.
paraguayensis (Seynesia) 462.
Paralimnae (Stigmatomyces) 121
paranensis (Laboulbenia) 193.
Parashoreae (Pycnocarpon) 510.
Parasiti (Rickia) 84.
parasitica (Endothia) 761.
parasitica (Homostegia) 626.
parasitica (Peronospora) 46.
parasitica (Phytophthora) 35, 37.
parasiticum Acrospermum) 1128.
parasiticus (Ascobolus) 1222.
parathesicola (Meliola) 325.
Parkinsoniae (Dimerosporium) 243.

Parinarii (Cocconia) 609.
Parinarii (Phacidium) 1261.
Parinarii (Phaeochorella) 609.
parmeliana (Homostegia) 627.
parmeliana (Trematosphaeriopsis) 627.
partia (Laboulbenia) 164.

partita (Laboulbenia) 164. partita (Xylaria) 1097. parvula (Meliola) 319. parvula (Merrilliopeltis) 1116. parvula (Rickia) 81. parvula (Valsa) 712. parvulum (Odontoschizon) 1272. Parydrae (Stigmatomyces) 123. Paspali (Phaeosphaerella) 925. paspalicola (Phyllachora) 584.

Pasqueti (Laboulbenia) 159.

passalina (Rickia) 89. Passiflorae (Lophodermium)1127 Passiflorae (Vizella) 402, 1021. Pastori (Zygosaccharomyces) 1313.

patagonica (Stomiopeltella) 529. patagonicum (Microthyrium) 425 patagonicum (Microthyrium) 529. patella (Diatrype) 740. Patellula (Meringosphaeria) 1068. patens (Meliola) 339. Patouillardi (Catacauma) 564. patrata (Laboulbenia) 207. patria (Diaporthe) 750. Paumamuae (Laboulbenia) 200. paucipes (Meliola) 329. paulensis (Scoria) 376. Paulliniae (Melicla) 290. Paulliniae (Perisporium) 262. Paulowniae (Sphaerella) 885. Paulowniae (Valsa) 715. paupercula (Laboulbenia) 194. paupercula (Sclerospora) 67. paurospora (Diatrype) 736. Paxii (Monascus) 1319. Pavettae (Lemboria) 495. pavonina (Stegasphaeria) 937. peckiana (Chorostate 750. peckiana (Curreya) 637. peckianum (Cenangium) 1226. peckianum (Phaeangium) 1230. Peckii (Uredo) 17. pectinulifera (Laboulbenia) 166. pedalis (Dimeromyces) 72. pedicellata (Laboulbenia) 195. Pedicularis (Peronospora) 60. pedrosensis (Guignardia) 787. Pegani (Pleospora) 1037. Peglerae (Meliola) 345. Peiroleri (Laboulbenia) 182. pelladense (Dimerosporium) 244. pelladensis (Physalospora) 803. pelladensis (Physalospora) 564. Pellatii (Pyrenophora) 1044. pellita (Pocosphaeria) 1003. pelliculosa (Meliola) 297.

pellucida (Calonectria) 681.

pellucida (Sphaerella) 876. peltata (Cordyceps) 699. peltata (Meliola) 277. Peltideae (Pharcidia) 895. peltigerea (Leptosphaeria) 1002. peltigericola (Pleosphaerulina) 1019.

peltigericola (Verrucaria) 1019. peltigereum (Trypetelium) 1002. Peltophori (Phyllachora) 593. Pelvetiae (Dothidella) 543, 545. Pelvetiae (Pharcidia) 893. Pelvetiae (Pleospora) 1024. Pelvetiae (Plowrightia) 542. Pelvetiae (Sphaerella) 849. Pelvetiae (Stigmatea) 395. pelvetiana (Didymosphaeria) 928. pelvetiana (Orcadia) 678. Penicillariae (Myrmaecium) 760. Penniseti (Didymella) 904. Penniseti (Phyllachora) 584. pentandrus (Stigmatomyces) 111. Pepo (Rosellinia) 834. Perae (Parodiopsis) 391. perconferta (Asterina) 466. perconferta (Sphaerella) 878. peregrina (Meliola) 325. perexigua (Gloniella) 1115. perexigua (Leptopeltella). 1115. perexiguum (Hysterium) 1255. perforans (Lecidea) 1274. perforans (Nesolechia) 1274. peribambusina (Physalospora) 798.

Pericampyli (Sphaerella) 878. Periplocae (Metasphaeria) 959. perileuca (Sordaria) 844. perisporioides (Parodiella) 251. perisporioides (Phaeotrabutiella) 609.

perisporioides (Phyllachora) 609. perlata (Phyllachora) 568. permasculus (Cantharomyces) 99. permixta (Phyllachora) 605. perpusilla (Asterina) 448. perpusilla (Calonectria) 681. perpusilla (Humaria) 1163.

perpusilla (Meliola) 271. perpusilla (Nectria) 656. perpusilla (Ophiotexis) 235. perpusilla (Pseudomeliola) 235. perpusilla (Rickia) 74. perpusillum (Hyaloderma) 235. perpusillus (Ecteinomyces) 142. Perseae (Meliola) 299. Perseae (Sphaerella) 871. Persicae (Sphaerotheca) 1333. persicino-tingens (Trematosphaeria) 1012. personata (Leptosphaeria) 1131. personata (Scleropleella) 1131. pertenue (Pseudohelotium) 1191. Pertusariae (Karschia) 1280. Pertusariae (Leciographa) 1290 perusensis (Rosellinia) 837. peruviana (Meliola) 273. Petchii (Dimeromyces) 69. Petchii (Haematomyces) 1240. Petchii (Hypocrea) 669. petiolicola (Plagiostomella) 708. Petrakii (Humaria) 1166. Petrakii (Leptosphaeria) 985. petrakiana (Diaporthe) 756. petrakiana (Didymosphaeria) 935. Peyerimhoffii (Cryptandromyces) 212. Peyerimhoffii (Rhachomyces 209. Peyerimhoffii (Rickia) 76. Peziza (Nectria) 661. Phacae (Peronospora) 56. phaeoconia (Phialea) 1184. phaeosoma (Laboulbenia) 185. phagospora (Humaria) 1166. Phalacri (Rickia) 84. Phanerae (Dothiopsis) 593. Phanerae (Phyllachora) 593. pharensis (Protomycopsis) 1319. Phaseoli (Hyponectria) 643. Phaseoli (Phytophthora) 35. Phaseoli (Pleosphaerulina) 1019. phaseolina (Phyllachora) 594. phaseolorum (Sphaerella) 872. phialopsis (Ocellaria) 1244. philippina (Ferrarisia) 241.

philippina (Laboulbenia) 167. philippina (Nectriella) 642. Philippinarum (Ceratosphaeria) 1075. Philippinarum (Kalmusia) 771 Philippinarum (Peroneutypa) 729 Philippinarum (Urnula) 1225. philippinense (Melanomma) 1009 philippinense (Myriangium) 1136 philippinensis (Bakeromyces) 817. philippinensis (Balladynopsis) 374. philippinensis (Ceratochaeta) 370. philippinensis (Chryptosphaeria) 733 philippinensis (Cryptovalsa) 734. philippinensis (Eremotheca) 528. philippinensis (Erinella) 1217. philippinensis (Gibbera) 923. philippinensis (Henningsomyces) philippinensis (Herpotrichia) 977. philippinensis (Hypoxylina) 650. philippinensis (Lembosia) 495. philippinensis (Lentomita) 1071. philippinensis (Linhartia) 1211. philippinensis (Linotexis) 235. philippinensis (Microthyriella) 526. philippinensis (Pleiostomella)418 philippinensis (Sclerospora) 66. philippinensis (Stictis) 1252. philippinensis (Stigmatea) 396. philippinensis (Uleomyces) 1137. philippinus (Coccomyces) 1268 Phillyreae (Valsa) 713. Philodendri (Meliola) 270. philonticola (Laboulbenia) 183. phoeticola (Phyllachora) 588. Phlomidis (Pleospora) 1039. Phlomidis (Sphaerella) 871. phlycticola (Celidium) 1298. phoenicicola (Anthostomella) 822 phorcioides (Massaria) 1005. Phormii (Hypostegium) 807. Phormii (Physalospora) 807. Phoradendri (Asterina) 458.

phrynostoma (Laboulbenia) 162. Phyllocharis (Xylaria) 1101. phyllogenum (Platystomum) 1110. phyllophila (Hypocrella) 693. phylloporina (Leciographa) 1291. Phyllostachydis (Hypocreopsis) 674.

Phyllostachydis (Ustilaginoidea) 674

phyllostictoides (Criserosphaeria) 1060. Physocarpi (Phyllachora) 602. Picardii (Laboulbenia) 168. Picramniae (Dothidella) 615. Picramniae (Endodothella) 615. Picramniae (Ophiodothis) 698. Picridis (Protomyces) 1316. pileata (Pyrenophora) 1041. Pilocarpi (Meliola) 339. pilosa (Trichosphaeria) 809. pinastri (Cenangella) 1230. pinastri (Dothiclypeolum) 617. pinastri (Gelatinosporium) 1233. pinastri (Scleroderris) 1233. pinastri (Tryblidiopsis) 1113. pinastri (Tryblidis) 1113. pinastri (Tympanis) 1230. pinetorum (Acetabula) 1158. pinguis (Stigmatomyces) 123. Pini (Xyloma) 1260. pinicola (Sphaerella) 858. pinnata (Rickia) 85. pinophylla (Calothyriella) 436. pinophylla (Gloniella) 1115. pinophylla (Leptopeltella) 1115. pipericola (Guignardia) 791. pipericola (Pseudonectria) 640. piperina (Asterina) 466. piperina (Meliola) 330. piperina (Physalospora) 1334. Piperis (Actinodothis) 418. Piperis (Asterina) 466. Piptadeniae (Hypoxlon) 1081. piptadenicola (Phyllachora) 594. Pipturi (Asterina) 474. Piri (Plectodiscella) 1141. piricola (Metasphaeria) 958.

pirifera (Apodachlya) 29. piriformis (Didymella) 907. piriformis (Sphaeria) 907. Pirolae (Depazea) 397. Pirolae (Sclerotinia) 1180. Pirolae (Stigmatea) 397. pistillariaeformis (Xylaria) 1097. Pithecolobii (Euryachora) 631. Pithecolobii (Montagnellina)631. Pittieri (Phyllachora) 599. Pittieri (Phyllachora) 573. pitya (Meliola) 278. pitya (Micropeltis) 515. placenta (Systremma) 548. placenta (Sphaerostilbe) 665. placentiformis (Dothidella) placentiformis (Ustulina) 1093. placida (Coccodothella) 459. placida (Plowrightia) 549. placida (Pseudomeliola) 388. Plagiochilae (Coleroa) 399. plagiostoma (Julella) 1054. plana (Hypocrella) 693. Planchoniae (Lophodermium)

1126.

planeticola (Laboulbenia) 187. planiuscula (Cryptovalsa) 735. Plantaginis (Anisomyxa) 33. Platani (Massaria) 1006. Platani (Zignoella) 965.

platanoides (Calosporella) 707. platensis (Asteronycha) 216. platensis (Autoicomyces) 147. platensis (Autophagomyces) 212.

platensis (Bordea) 106. platensis (Cantharomyces) 99.

platensis (Chantransiopsis) 216. platensis (Compsomyces) 211.

platensis (Corethromyces) 132. platensis (Dimorphomyces) 72. platensis (Ecteinomyces) 141. platensis (Laboulbenia) 189.

platensis (Rickia) 75.

platensis (Stigmatomyces) 117. platensis (Trenomyces) 129. platyasca (Dothidella) 613.

platypoda (Asterina) 468.

platysperma (Meliola) 318.
platystoma (Stigmatomyces) 115.
Plectroniae (Guignardia) 791.
pleiospora (Pleoscutula) 1285.
plerophilus (Tettigomyces) 86.
pleospora (Pleophragmia) 1055.
pleurota (Jotidea) 1161.
plumigena (Massaria) 1005.
Poae (Chaetopyrena) 961.
Poae - nemoralis (Phyllachora) 584.

Podocarpi (Dimerina) 245. Podocarpi (Meliola) 278. podolica (Pyrenopeziza) 1195. Podontiae (Laboulbenia) 166. podophilus (Corethromyces 135. podophilus (Stichomyces) 135. Pogonatheri (Phyllachora) 584. polita (Moutoniella) 1258. polita (Nectria) 661. Polygoni (Ceriosporella) 962. polygonia (Diatrype) 738. polygramma (Eutypa) 726. polygramma (Sphaerella) 871. polymorpha (Pichia) 1312. polymorpha (Pyrenopeziza) 1197. polyphaga (Laboulbenia) 185. polypoda (Amazonia) 504. Polypogonis (Phyllachora) 585. polyspora (Pleodothis) 543. polyspora (Plowrightia) 543. Polystichi (Laboulbenia) 167. polystoma (Phaeodothis) 619. polytricha (Trichaleurina) 1207. pomacearum (Massaria) 1007. Pomacearum (Massarina) 962. Pometiae (Micropeltis) 519. pomiformis (Melanopsamma) 920 Pongamiae (Cryptomyces) 592. populinum (Ceuthocarpon) 707. populnea (Sphaerella) 885. porcina (Ascodesmis) 1167. poricola (Nectria) 657. poromera (Puccinia) 1329. porrectus (Stigmatomyces) 112. porrigens (Laboulbenia) 169.

porriginosa (Asterina) 444.
portoricense (Perisporium) 261.
portoricensis (Corynelia) 1104.
portoricensis (Desmotascus) 795.
portoricensis (Dothidella) 545.
portoricensis (Halstedia) 554.
portoricensis (Meliola) 277.
portoricensis (Nectria) 652.
portoricensis (Peronoplasmopara) 63, 1333.

portoricensis (Trabutia) 558. portoricensis (Wageria) 259. Pothoidei (Lembosia) 491. praeandicola (Cucurbitaria) 1058. praeandina (Eutypa) 725. praeandina (Eutypella) 717. praeandina (Gibberidea) 1017. praeandinum (Hysterographium)

prahliana (Naevia) 1246.
Premnae (Epiphyma) 239.
Premnae (Eutypella) 723.
Premnae (Phyllachora) 605.
prenanthicola (Sphaerella) 857.
priuscheggiana (Leptosphaeria) 992.

procumbens (Ophiognomonia) 708.

prodiga (Asterina) 475.
profunda (Anthostomella) 818.
profusa (Enchnosphaeria) 974.
profusa (Winterina) 970.
profusus (Rehmiomyces) 970.
prolifera (Blastocladia) 30.
proliferans (Laboulbenia) 202.
proliferans (Stigmatomyce) 115.
prominens (Trematosphaeria)
1011.

propincua (Ceratosphaeria) 1075. propincua (Physalospora) 797. propolinoides (Pleiostictis) 1260. propincuum (Gloeosporium)1076 prosopidicola (Teichospora) 1050 Prosopidis (Didymosphaeria) 931 Prosopidis (Pleospora) 1033. Proteae (Oligostroma) 615. Protearum (Leptosphaeria) 998.

protracta (Cryptovalsa) 734. proteacium (Aulographium)1113. protrudens (Stigmatomyces) 123. proxima (Patellaria) 1286. proximella (Valsa) 716. proximellum (Celidium) 1299. Pruni (Bagnisiella) 541. Pruni (Chorostate) 750. Pruni (Leptosphaeria) 989. Pruni-americanae (Teichospora) 1050. Pruni-Cerasi (Venturia) 899. Pruni-spinosae (Cucurbitaria) 1058. prunicola (Botryosphaeria) 812. prunicola (Bulgaria) 1240. Prunophorae (Coccomyces) 1270 Pselapti (Pselaphidomyces) 208. pseudes (Phyllachora) 598. Pseudo-acaciae (Sphaerella)874. Pseudococci (Entomophthora) 13 Pseudocymopteri (Puccinia) 1330. pseudodecipiens (Laboulbenia) 190. pseudoflagellata (Laboulbenia) 193. Pseudodiplodia (Sphaeropsis 805 pseudodothidea (Mycrothyrium) 413. pseudotrichia (Megalonectria)689 pseudoperisporioides (Dimerium) 254. Pseudopeziza (Parodiella) 1144. Pseudopeziza (Pseudoparodia) 1144. pseudo - pustula (Amerostega) 1132. pseudo-pustula (Physalospora) 1132. pseudoradicalis (Endothia) 761. pseudoradicalis (Endothia) 760. pseudostromatica (Metasphaeria) 956. pseudostromatica (Teichospora) 1049.

Psidii (Diatrypella) 742.

psilina (Laboulbenia) 166.

Psilopae (Stigmatomyces) 122. psittacea (Laboulbenia) 200. Psophocarpi (Uromyces) 17. Psychotriae (Hysterostomella) 416. Psychotriae (Inocyclus) 416. Psychotrae (Maurodothella) 497. Psychotriae (Meliola) 335. Ptarmica (Schizothyrioma) 1112. Ptarmicae (Schizothyrium) 1256. pteridicola (Corynelia) 1105. pteridicola (Meliola) 290. Pteridis (Clathrospora) 1039. Pteridis (Lophiotrema) 1107. Pteridis (Sphaeria) 1257. Pteridis (Uleodothis) 544. pteridophylla (Dasyscypha) 1203. Pterocarpi (Catacauma) 560. Pterocarpi (Dothidea) 766, 767. Pterocarpi (Dothidella) 610. Pterocarpi (Homostegia) 627. Pterocarpi (Homostegia) 767. Pterocarpi (Phaedothiopsis) 618. Pterocarpi (Phyllachora) 560,610 Pterocarpi (Placostroma) 610. Pterocarpi (Pseudothis) 766, 767. Pterocarpi (Uncinula) 224. Pterocarpiae (Meliola) 307. Pterogenii (Stichomyces) 136. Pterospermi (Phyllachora) 604. Pterostichi (Laboulbenia) 195. Ptychospermatis (Nectriella) 642. puccinioides (Auerswaldia) 541. puccinioides (Auerswaldiella)541 Puerariae (Woroninella) 17. puiggariana (Dialhypocrea) 673. Puiggarii (Acrospermum) 1130. Puiggarii (Anthostomella) 820. Puiggarii (Chaetosphaeria) 1014. Puiggarii (Coccomyces) 1268. Puiggarii (Cordyceps) 699. Puiggarii (Dasyscypha) 1203. Puiggari (Guignardia) 788. Puiggarii (Hyaloderma) 233. Puiggarii (Hysterostomella) 410. Puiggari (Laestadia) 788. Puiggari (Montagnella) 624.

Puiggarii (Patellonectria) 1339. Puiggarii (Pezizella) 1186. Puiggari (Phragmocarpella) 624. Puiggarii (Plowrightia) 543. Puiggari (Rhiphidonema) 1325. Puiggarii (Stictis) 1251. pulchella (Cyclodothis) 633. pulchella (Dexteria) 703. pulchella (Laboulbenia) 186. pulchella (Linospora) 1062. pulchella (Melittosporiella) 1251. pulchella (Neotrotteria) 777. pulchella (Trichospermella) 364. pulchellus (Corethromyces) 133. pulcherrima (Meliola) 361. pulcherrima (Meliolina) 361. pulcherrima (Polystomella) 408. pulchra (Questieria) 478. pulchra (Rickia) 78. pulchrum (Dimerosporium) 478. pulchrum (Pythium) 1331. pulicaris (Gibberella) 687. pulicaris (Lisea) 676. Pulmonariae (Peronospora) 38. pulposi (Didymella) 905. pulposi (Didymosphaeria) 905. pulveracea (Rosellinia) 833. pulverosum (Xylogramma) 1250. pulverulenta (Dothidella) 634. pulverulentus (Monopus) 634. pulvinatum (Celidium) 1298. pulvinula (Isomunkia) 395. pumila (Rickia) 75. pumilum (Hysterangium) 1327. punctata (Apodachlya) 29. punctiforme (Ceutocarpon) 1061. punctiformis (Sphaerella) 882. punctillum (Leptosphaeria) 1001. punctulata (Nummularia) 1086. pungens (Meliola) 268. pura (Bulgaria) 1238. pura (Ombrophila) 1238. pura (Peziza) 1238. purpurascens (Melanomma)1009. Pusaetae (Phyllachora) 594. pusense (Helotium) 1183. pusilla (Ascotricha) 240.

pusilla (Asterina) 474. pusilla (Diaporthe) 756. pusilla (Dimerosporina) 369. pusilla (Eutypella) 1336. pusilla (Lachnea) 1177. pusilla (Leptosphaerella) 999. pusilla (Leptosphaeria) 999. pusilla (Peroneutypella) 732. pusilla (Phylacia) 1085. pusillimus (Ecteinomyces) 143. pusillimus (Henningsomyces)375 pusillum (Chaetomium) 240. pusillus (Rhopographus) 625. Pustula (Chalchosphaeria) 707. pustulata (Chorostate) 751. pustulata (Diaporthe) 751. putaminum (Pleospora) 1025. Puttemansii (Ascopolyporus)701 Puttemansii (Asterella) 440. Puttemansii (Auerswaldia) 540. Puttemansii (Bertia) 917. Puttemansii (Coccostroma) 540. Puttemansii (Lembosia) 494. Puttemansii (Meliola) 300. Pycrei (Phyllachora) 570. pygiphilus (Corethromyces) 134. pygmaeum (Trichothecium) 927. pygmaeus (Corethromyces) 135. Pynaerthi (Hypoxylon) 1084. pyrenocarpoidea (Cenangella) 1231. pyrenocarpoides (Pyrenopeziza) 1197.

pyrenocrata (Theissenia) 1092. pyrenocrata (Ustulina) 1092. pyrosphaera (Nectria) 660.

quadrangulatum (Chaetomium) 841.

quadratus (Coccomyces) 1268. quadrifurcata (Meliola) 280. quadrinucleatum (Lophiostoma) 1108.

quadrospora (Phyllachora) 583. Quamoclidii (Leptosphaeria) 988. quarta (Asterina) 462. quaternella (Mycobilimbia) 1289. quercicola (Auerswaldia) 613. quercicola (Coccochorella) 613. quercigena (Trichothyriella) 507. quercigenum (Trichothyrium)507 quercina (Didymella) 903. quercina (Meliola) 362. quercinopsis (Meliola) 362. quercinum (Colpoma) 1260. quercinum (Xyloma) 1257. quercinus (Melanomyces) 918. quercinus (Phaneroascus) 1146. Quercus Ilicis (Cucurbitaria) 1056 quinqueseptata (Herpotrichia) 978. quinta (Asterinella) 486.

racemosa (Achlya) 26. rachidis (Rosellinia) 829. Raciborskii (Phyllachora) 582. Racovitzae (Gymnoascus) 1146. Racovitzae (Myxotrichum) 1146. radians (Meliolina) 360. radians (Pseudopeziza) 1199. radiata (Rickia) 81. radiata (Sphaerella) 891. radiata (Stictis) 1252. radicalis (Endothia) 708, 761. radicalis (Endothia) 760. radicalis (Sphaeria) 760. radicans (Xylaria) 1098. radicis (Olpidiaster) 1331. Radii (Peronospora) 42. radiosa (Achlya) 26. radiostriatus (Pezizellaster) 1190. Ragazzii (Laboulbenia) 204. Raimundi (Coniochaeta) 832. Raimundi (Rosellinia) 832. Raimundoi (Humaria) 1164. Raimundoi (Massarina) 963. Raimundoi (Metasphaeria) 954. Ramalinae (Arthopyrenia) 896. Ramalinae (Patellaria) 1284. Ramalinae (Pharcidia) 896. Ramalinae (Scutula) 1284. Ramosii (Asterina) 450. Ramosii (Dimerium) 253. Ramosii (Meliola) 287.

Ramosii (Micropeltella) 520 Ramosii (Microthyrium) 423. Ramosii (Morenoëlla) 499. Ramosii (Parasterina) 478. ramosum (Mitochytridium) 20. ramosum (Pythiogeton) 1332. ramosus (Rhizopus) 8. ramulare (Myiocopron) 639. Ramulariae (Neonectria) 665. ramularis (Microdothella) 639. ramuligera (Asterinella) 481. Ramusii (Linobolus) 1060. Ranunculi (Peronospora) 58. ranunculoides (Leptosphaeria)992 raripila (Unguicularia) 1202. Ravenalae (Catacauma) 563. Ravenalae (Phyllachora) 563. recedens (Diaporthe) 758. recondita (Diaporthe) 753. rectangularis (Meliola) 312, 652. rectus (Corethromyces) 134. recurvus (Mucor) 1. refractus (Dioicomyces) 103. regalis (Scirrhophragma) 621. regulinoides (Trichosphaeria)809 rehmiana (Pleospora) 1033. rehmiana (Sphaerella) 865 Rehmii (Asterella) 412. Rehmii (Curreya) 1024. Rehmii (Placoasterella) 412. reinkingiana (Physalospora) 798. Reinkingii (Meliola) 296. remuliformis (Boydia) 683. repanda (Polystomella) 407. repandoides (Nummularia) 1087. reperta (Aleurina) 1208. reperta (Podoleuris) 1208. reticulata (Parodiella) 251. Rehesii (Metasphaeria) 953. Reukautii (Anthomyces) 1311. Reukautii (Nectaromyces) 1311. revocans (Lisea) 676. Reyesi (Sphaerella) 885. reyesiana (Nectria) 661. reyesiana (Nummularia) 1088. reyesiana (Rhopographella) 622. reyesianum (Lophodermium) 1 127 Rhabdodendri (Asterina) 469. rhacheophila (Physalospora) 804. rhacodioides (Rosellinia) 830. Rhacodium (Sphaeria) 975. rhacomycoides (Rickia) 75. rhanicensis (Diaporthe) 759. rhanicensis (Rosellinia) 827. rhamnigena (Diaporthe) 753. Rhaphidophylli (Bilimbia) 1288. Rhaphidophylli (Mycobilimbia) 1288.

Rheediae (Micropeltis) 517. rhemiana (Ellisiodothis) 406. rhemiana (Phyllachora) 405. rhinoceralis (Corethromyces) 133. rhinoceralis (Laboulbenia) 163. rhizomaticola (Helotium) 1183. rhizophila (Melanospora) 648. rhizophilus (Mucor) 6. rhizophorus (Ceratomyces) 149. Rhododendri (Criella) 1257. Rhododendri (Cryptomyces) 1257. rhododendrophila (Valsa) 712. rhodosticta (Neopeckia) 945. rhodostoma (Neopeckia) 945. rhoina (Bagnisiella) 390. rhoina (Bagnisiopsis) 390. rhomboidalis (Taphrina) 1303. Rhopalae (Phyllachora) 602. rhopaloides (Micropeltis) 519. Rhynchosiae (Aphysa) 400. Khynchosporae (Guignardia) 781. Rhynchosporae (Lizonia) 544. Rhynchosporae (Plowrightia) 544 Rhynchosporae (Uleodothis) 544. rhytidopus (Ecteinomyces) 142. Rhytisterni (Laboulbenia) 203. rhytismoides (Hysterostomella) 408, 410.

rhytismoides (Lembosia) 410. rhytismoides (Phyllachora) 592. rhytismoides (Polycyclina) 408. ribicola (Sphaerella) 886. Ribis (Botryosphaeria) 813. ribis (Melanconis) 747. ribis (Neokeissleria) 747. Ribis (Saccharomyces) 1305. Ribis aurei (Eutypella) 722. Ricasoliae (Arthonia) 1297. Ricasoliae (Conida) 1295. Ricasoliae (Karschia) 1280. Richenii (Orbicula) 241. Richteri (Laboulbenia) 192. Ricini (Asterina) 489. Ricini (Clypeolella) 489. Ricini (Sclerotinia) 1178. rickiana (Letendrea) 677. rickiana (Phyllachora) 599. rickianum (Chaetothyrium) 379. Rickii (Actiniopsis) 504. Rickii (Asterina) 462. Rickii (Endodothella) 614. Rickii (Hypocrea) 670. Rickii (Lophiotrema) 1107. Rickii (Mycothyriella) 1255. Rickii (Myxomyriangium) 1138. Rickii (Saccardia) 1138. Rickii (Saccardinula) 1138. rigida (Meliola) 291. rigidula (Laboulbenia) 181. rigidula (Winterina) 969. rimulosa (Eutypa) 725. rimulosa (Phyllachora) 600. Riofrioi (Leptosphaeria) 986. riograndensis (Diatrype) 737. riograndensis (Pleonectria) 688. rizalense (Dimerium) 257. rizalenisis (Meliola) 352. Robiniae (Sphaerella) 874. Rochai (Amphisphaeria) 943. Rolliniae (Lembosia) 491. romana (Laboulbenia) 193. romana (Rosellinia) 831. Roripae (Zignoella) 965. Roripae islandicae (Peronospora) 51.

51.
Rosae (Actinonema) 912.
Rosae (Diplocarpon) 911.
Rosae (Phomatospora) 795.
Rosae (Sphaerotheca) 1333.
Rosarum (Valsa) 714.
rosella (Naevia) 1247.
roseo-flavida (Pezizella) 1187.
rostellatus (Dioicomyces) 103.

rostrata (Blastocladia) 30. rostrata (Rickia) 79. rostrata (Teichospora) 1048. rostratus (Corethromyces) 132. 10stratus (Stigmatomyces) 121. Rostrupii (Leptosphaeria) 993. Rottboelliae (Apiospora) 914. Rottboelliae (Meliola) 293. Rottboelliae (Phyllachora) Rottboelliae (Rhabdostroma) 914. rotundatum (Lophodermium) 1125. Rougeti (Laboulbenia) 181. Roureae (Meliola) 279. Roureae (Phyllachora) 569. Roureae (Sphaerella) 858. Roystoneae (Phyllachora) 601. rubescens (Amorphomyces) 101. rubescens (Valsa) 714. Rubi (Coccochora) 617. Rubi (Coccomyces) 1270. Rubi (Hypoderma) 1256. Rubi (Hypomyces) 675. Rubi (Nectria) 675. Rubi (Otthia) 947. Rubi (Saccardoella) 963. Rubi (Zignoella) 967. Rubi-fruticosi (Apiospora) 612. Rubi-Idaei (Coleroa) 900. Rubi-Idaei (Niesslia) 900. Rubi-Idaei (Pyrenochaeta) 901. Rubiacearum (Lembosia) 496. Rubiacearum (Polystomella) 408. Roborum (Eutypella) 722. rubra (Gloniella) 1114, Rudolphiae (Meliola) 308. rufa (Dothiora) 1243. rufa (Haematomyxa) 1243. rufescens (Helotium) 1183. Rufescentis (Pleospora) 1033. rufidula (Phialea) 1186. rufipilum (Chaetomium) 839. rufula (Tryblidiella) 1119. rufulum (Rhytisma) 528. rugosa (Gibberella) 687.

rugosissimus (Polystictus) 1323. rugulosa (Discosia) 1073. rugulosa (Laboulbenia) 188. Rumicis (Dictyochora) 628. Rumicis (Dothidella) 628. ruscicola (Leptosphaeria) 997. ruthenica (Pseudopleospora) 1132.

sabauda (Leptosphaeria) 995.

saccardoana (Asterina) 471.

saccardoana (Sphaerella) 870. Sacchari (Euryachora) 1334. Sacchari (Lophodermium) 1126. Sacchari (Linospora) 1061. Sacchari (Meliola) 294. Sacchari (Sclerospora) 65. Sacchari-spontanei (Phyllachora) 586. Sacchariferae (Anthostomella) 821 saccharina (Valsa) 711. saccharoides (Sphaerella) 867. saccoboloides (Pleospora) 1035. saginata (Asterina) 443. saginata (Asterinella) 485. sakawensis (Meliola) 350. salicella (Dothideopsella) 552. salicina (Sphaerulina) 951. salicina (Sphaerulina) 1024. salinicola (Diaporthe) 752. salicinum (Xyloma) 1257. Salicis (Jaraia) 32. Salicis (Limacinula) 387. salicis (Sphaerella) 885. Salicis (Teichospora) 387. Salicis (Valsella) 708. Salmoni (Uncinula) 225. Salvadorae (Dothidella) 427. Salvadorae (Protothyrium) 427. salvatorensis (Sphaerella) 882. Salviae (Melanopsamma) 919. samarensis (Dimerina) 245. samarensis (Micropeltis) 516. samarensis (Meliola) 358. samarensis (Morenoëlla) 501. samaricola (Septochora) 638. Sambuci (Dothidea) 548. samoensis (Phyllachora) 590. santacruzensis (Pseudosaccharomyces) 1309.

sandicensis (Curreya) 637. sandicensis (Hyalocurreya) 637. Sandorici (Meliola) 319. sanguinea (Ombrophila) 1237. sanguinea (Phyllachora) 562. sanguinea (Teichosporella) 1022. sanguineo-atrum (Rhynchostoma) 1074.

sanguineum (Catacauma) 551. sanguineus (Uleomyces) 1137. sanguinolenta (Phyllachora) 582. Sanguisorbae (Fabraea) 1263. Santiriae (Asterinella) 479. Saponariae (Pyrenophora) 1041. Saprolegniae (Olpidiopsis) 16. Sapromyzae (Laboulbenia) 167. sarawakensis (llytheomyces) 125. sarawakensis (Rickia) 84. sarmentorum (Gloniella) 1256. Saulae (Rickia) 84. sauropicola (Meliola) 289. Saussureae (Bremia) 62. saxatilis (Peronospora) 60. saxicolae (Sphaeria) 905. Saxifragae (Sphaerella) 885. Saxifragae (Trichosphaeria) 809. saxonica (Leptosphaeria) 982. scabridula (Lecidea) 1273. scabridula (Nesolechia) 1273. scabrosum (Dimerium) 254. Scaphidomorphi (Laboulbenia) 200.

scelisca (Laboulbenia) 184. Scevolae (Meliola) 292. Scheffleri (Dimerosporium) 948. Scheffleri (Porostigme) 948. Schizolobii (Meliola) 308. Schizosporum (Lophium) 1128. Schizostachyi (Amphisphaeria) 940.

Schizostachyi (Anthostomella) 818, 819.

Schizostachyi (Metasphaeria) 954. Schizostachyi (Stereocrea) 685. Schlegeliae (Meliola) 273. Schmidtii (Melonospora) 650. Schmidtii (Pilobolus) 11. schoenicola (Phyllachora) 570. schwabianus (Stigmatomyces) 113 Schweinfurthii (Asterella) 412. Schweinfurthii (Placoasterella) 412.

scirpicola (Guignardia) 782. scirpicola (Micropeziza) 533. scirpicola (Niesslella) 533. sclackensis (Laboulbenia) 167. sclerotinius (Polyporus) 1322. Scopaei (Corethromyces) 133. scopiformis (Xylaria) 1095. Scorodoniae (Phragmonaevia) 1250.

scutata (Nummularia) 1088. Scutiae (Meliola) 331. Scutiae (Microthyrium) 426. Scydmaeni (Rickia) 82. scydmaenicola (Corethromyces) 133.

Sebetheos (Laboulbenia) 187. secunda (Phyllachora) 571. Semecarpi (Micropeltis) 514. senegalense (Microthyrium) 424. senegalensis (Botryosphaeria) 811.

senegalensis (Didymella) 904. senegalensis (Zignoella) 966. Sengokui (Uncinula) 225. separans (Tuber) 1152. separato - setosae (Actinocymbe) 389

separatus (Stigmatomyces) 119. sepincola (Leptosphaeria) 1020. sepincola (Metasphaeria) 959. sepincola (Metasphaeria) 1020. sepincola (Sphaeria) 1020. sepincola (Sphaeria) 1020. septata (Uncinula) 224. septentrionalis (Peronospora) 39. septorispora (Sphaerella) 864. sepulchretorum (Laboulbenia) 198.

sepulta (Dothidasteromella) 411. sepulta (Dothidea) 411. sepulta (Meliola) 349. seriata (Didymella) 904.

seriata (Phyllachora) 583. seriata (Scirrhia) 611. seriata (Scirrhodothis) 611. seriata (Stigmatea) 397. seriatus (Ophiobolus) 1063. Serjaniae (Meliola) 344. Serjaniae (Phyllachora) 603. serotina (Morchella) 1155. serrensis (Asterina) 463. sessilis (Balansia) 697. setacea (Gnomonia) 1072. Setchellii (Hydnotryopsis) 1150. seticola (Chitonomyces) 91. setifer (Microascus) 838. setiformis (Lachnella) 1200. setocephala (Xylaria) 1101. setosa (Zukalia) 381. setosum (Hypocapnodium) 376. setulosa (Erinella) 1218. setulosa (Menezesia) 1321. sennemiana (Peronospora) 56. sexspora (Trichothyriopsis) 507. sexsporum (Trichothyrium) 507. Shearii (Tuber) 1152. Shepherdiae (Valsa) 710. shiraiana (Munkiella) 395. shiraianum (Melanconium) 395. shoreana (Asterina) 451. Siagonae (Laboulbenia) 168. sicula (Laboulbenia) 182. siculus (Thamnomyces) 1103. Sidae (Meliola) 314. Sieversiae (Lophiostoma) 1109. Sigaloessae (Stigmatomyces) 123. sigmoidea (Laboulbenia) 188, sigmoideus (Corethromyces) 135. Silenes (Cytospora) 1027. Silenes (Pleospora) 1027. Sileries (Pyrenophora) 1042. silenicola (Sphaerella) 856. Silphidadum (Corethromyces) 130. silvatica (Asterina) 477. silvatica (Peronospora) 59. Silvestrii (Rickia) 76.

silvestris (Peronospora) 61.

similis (Ceratostomella) 1069.

similis (Micropeltis) 518. similis (Pezizellaster) 1190. similis (Trichosphaerella) 810. simillina (Asterina) 448. simillima (Leptosphaeria) 980. Simmonsii (Leptosphaeria) 993. simplex (Anthostoma) 825. simplex (llytheomyces) 127. simplex (Leptomassaria) 826. simplex (Quaternaria) 826. simplocinum (Phacidium) 1261. simulans (Sphaerella) 864. sinensis (Hyponectria) 643. sinensis (Phyllachora) 576. singaporense (Dimerium) 255. singaporensis (Asterina) 457. singaporensis (Kretzschmaria) 1085. singaporensis (Nummularia) 1087. singularis (Caloplactis) 760. singularis (Endothia) 760. sinuesa (Meliela) 320. siramboensis (Laboulbenia) 196. Sisymbrii (Didymella) 902. Sisymbrii (Peronospora) 51. Sisymbrii intermedii (Peronospora) 53. Sisymbrii Loeselii (Peronospora) 52. Sisymbrii officinalis (Peronospora) 51. Sisymbrii orientalis (Peronospora) 52. Sisymbrii Sophiae (Peronospora) 52. Sisymbrii Thaliani (Peronospora) smilacincola (Sphaerulina) 950. smilacina (Metasphaeria) 955. Smilacis (Leptosphaeria) 987. Smilacis (Meliola) 310. Smilacis (Phyllachora) 595. smithianum (Pseudocenangium) 1232. Solani (Clypeolella) 489. Solani (Dimerium) 256.

Solani (Leptosphaeria) 991.

Solani (Leptosphaeria) 991. Solani (Meliola) 346. solanicola (Anthostoma) 745. solanicola (Leptosphaeria) 991. solanicola (Physalospora) 805. solaris (Asterina) 412. solaris (Asterodothis) 411. Solidaginis (Pleospora) 1037. solidus (Gymnomyces) 1328. somala (Gloniopsis) 622, 1119. somala (Rosellinia) 836 somala (Zignoella) 965. Sonchi (Bremia) 62. Sonchi (Protomyces) 1316. Sophiae pinnatae (Peronospora) 52.

sorbicola (Chorostate) 750. sorbicola (Diaporthe) 750. sorbina (Anthostomella) 824. sordescens (Nectria) 651. sordida (Laboulbenia) 160. sordidula (Nectria) 654. sordidulus (Loranthomyces) 507. Sordiola (Karschia) 1279. Soroceae (Linhartia) 1212. Soroceae (Linhartia) 402. Soroceae (Meliola) 323. sororia (Pleospora) 1026. sparsa (Phaeodothis) 619. Spatholobi (Erikssonia) 848. Spatholobii (Lisea) 676. spathulata (Rickia) 79. spathulatum (Geoglossum) 1157. speciosa (Meliola) 276. spectabile (Acanthostigma) 970. Speculariae (Peronospora) 38. Spegazzinii (Nectria) 658. Spegazzinii (Parodiella) 252. speluncalis (Sphaleromyces) 139. speluncarum (Ombrophila) 1236 sphaerale (Chaetomium) 841. sphaerelloides (Anthostomella) 817.

sphaerelloides (Didymella) 907. sphaerica (Cocconia) 630. sphaeriophila (Nectria) 662. sphaeroidea (Coccodothis) 549.

sphaeroidea (Dothidea) 549. sphaeroidea (Hypocrella) 694 sphaeroidea (Melanopsamma)

sphaerocephalum (Lachnum) 1202.

sphaeropoda (Asterina) 454. sphaerospora (Anthostoma) 744. sphaerotheca (Asterina) 475 sphinctrinoides (Didymella 906. Sphodri (Laboulbenia) 203. spilogena (Didymosphaeria) 928. spinosa (Achlua) 26. spinosum (Chaetomium) 842. spinosus (Mucor) 1. spinulosa (Lamprospora) 1170. spinulosus (Phycomyces) 9. Spiraeae (Belonium) 1215. spiraeina (Pleospora) 1036. scissa (Asterina) 464. spissa (Phyllachora) 592. splendens (Taphrina) 1302. spongiosa (Limacinia) 382. spontanea (Sclerospora) 67. Squamariae (Pharcidia) 896. Stachydis (Pyrenophora) 1045. stagnalis (Laboulbenia) 173 stagnalis (Saprolegnia) 25. Standleyi (Diatrype) 739. standlevanum (Hysterium) 1116. Staphyleae (Metasphaeria) 960. staphylina (Eutypella) 723. Staritzii (Leptosphaeria) 988. steineriana (Rosellinia) 831. Steleoceri (Laboulbenia) 168. Stella (Aldona) 1257. Stellariae (Dothidella) 609. Stellariae (Omphalospora) 609. Stellariae (Pleospora) 1027. stellaris (Euryachora) 631. stellaris (Montagnellina) 631. stellata (Stictis) 1252. stellata (Amphisphaeria) 938. stellata (Balansina) 477. stellata (Astrosphaeriella) 938. Stellulatae (Didymosphaeria) 931

Stenochlaenae (Chaetaspis) 419.

Stenolophi (Laboulbenia) 183. stenophora (Eutypa) 726. stenospora (Naevia) 1245. Stenotaphri (Meliola) 294. Stenotarsi (Rickia) 82. Stenussae (Monoicomyces) 94. Stephani (Guignardia) 780. Sterculiae (Guignardia) 792. sternalis (Corethromyces) 135. Stevensi (Dimerium) 253. Stevensii (Meliola) 343. stictaria (Arthonia) 1297. stictaria (Conida) 1297. Stictinae (Müllerella) 816. Stictis (Cryptodiscus) 1249. Stigma (Diatrype) 737. stigmaticola (Peronospora) 55. Stigmatomatis (Celidium) 1298. Stigmatostalycis (Myiocopron)422 stigmoides (Leciographa) 1292. stigmoides (Melaspilea) 1292. stigmoides (Opegrapha) 1292. Stigmophylli (Sphaerella) 878. Stilici (Corethromyces) 134. Stilici (Stigmatomyces) 124. stilicicola (Corethromyces) 135. stilicicola (Laboulbenia) 188. Stilopygae (Herpomyces) 100. Stipae (Leptosphaeria) 984. Stipae (Pleospora) 1038. stipata (Chantransiopsis) 216. stipatus (Cucujomyces) 215. stipitatus (Rhachomyces) 209. stolonicola (Laboulbenia) 190. Stowardi (Didymosphaeria) 930. strangulata (Blastocladia) 30. Strasseri (Cenangium) 1226. Streblae (Stigmatomyces) 124. Strebli (Allescherina) 733. Strebli (Diatrype) 739. Strebli (Valsaria) 763. streblidinus (Nycteromyces) 85. Strewiae (Englerula) 231. striata (Sordaria) 847. striatiformans (Sphaerella) 867. striatospora (Didymosphaeria) 929.

striatula (Nectria) 656. striatula (Phyllachora) 575. striatum (Fielotium) 1182. striatus (Chitonomyces) 91. strictipes (Laboulbenia) 193. striispera (Chromocreopsis) 1338, Strobi (Cenangium) 1229. strobiligena (Pleoglonis) 1113. strobiligenum (Glonium) 1113. stromaticola (Metasphaeria) 959. Strophanti (Meliola) 267. Struthiopteridis (Taphrina) 1338 Strychni (Dimerosporium) 243. Stryphnodendri (Dothidea) 617. Stryphnodendri (Phaeodothiopsis) 617. styracicola (Meliola) 347. Styracis (A sterina) 477. Styracis (Naemacyclus) 634. Styracis (Rosenscheldiella) 634. Styracis (Trichasterina) 477. suaveolens (Pichia) 1312. subalpina (Calloria) 1241. subalpina (Leptosphaeria) 984. subandina (Pleosphaeria) 1053. subandinum (Melanomma) 1008. subapiculata (Nummularia) 1091. subapoda (Meliola) 289. subastoma (Sphaerella' 865. subbicolor (Laboulbenia) 190. subbituberculata (Laboulbenia) 191. (Phyllachora) subbrachyspora 572. subcolliculosum (Calothyrium) 440 subcommunis (Laboulbenia) 184 subconveniens (Arthonia) 1296. subconveniens (Conida) 1296. subcutanea (Venturia) 899. subdivaricata (Laboulbenia) 202. subdivisus (Coreomyces) 150. subferruginea (Bolosphaera) 926. subgaleatus (Cryptandromyces) 213. subglobosus (Ascobolus) 1221.

subgriseum (Eurotium) 225.

subgriseus (Aspergillus) 226. subhyalina (Thaxteriola) 219. subiculata (Hypocrea) 672. subiculosa (Ceratosphaeria) 1075. subiculosa (Wallrothiella) 808. subinaequilatera (Peyritschiella) 87.

subinaequilaterus ( Dichomyces ) 87.

subinermis (Asterina) 475. subinflata (Laboulbenia) 158. subinflatus (Stigmatomyces) 114. subintermedia (Phyllachora) 653 subinterposta (Laboulbenia) 202. sublinearis (Diatrype) 736. subminuta (Amphoropsis) 218. subolivaceum (Septobasidium) 1325.

suboncogona (Laboulbenia) 185. subopaca (Laboulbenia) 179. suborbicularis (Nummularia)1090. subsigmoideus (Corethromyces)

subsimilis (Rosellinia) 833. subspirale (Chaetomium) 840. substenospora (Meliola) 293. subtilissima (Zignoella) 964. subtorulosus (Dioicomyces) 104. subtropica (Gibberella) 687. subtropicale (Lophodermium)

subtropicale (Symphaeophyma) 616.

subturbinata (Humaria) 1167. subulata (Laboulbenia) 161. subuliformis (Protascus) 15. subumbrinus (Gymnoascus 1146. subvulgaris (Laboulbenia) 184. suecica (Calospora) 768. succinea (Fabraea) 1264. suchumica (Pleosphaerulina) 1020. suchumica (Sphaerulina) 1020. suffusa (Cryptospora) 708. sulcata (Acetabula) 1158. sulcata (Calosphaeria) 709. sulcigena (Hypodermella) 1112. sulcigena (Lophodermella) 1112.

sulcispora (Nectria) 654, sulphurea (Eutypella) 719, sulphureus (Hypomyces) 674, sulphur.color (Dasyscypha) 1204, superflua (Didymella) 910, superflua-Sisymbrii (Didymella) 902,

Suzannae (Chorostate) 749. Suzannae (Helotium) 1183. Sycomori (Trabutia) 557. syconophilum (Acrospermum) 1130.

sydowiana (Delitschia) 947. sydowiana (Guignardia) 788. sydowiana (Nectria) 663. Sydowii (Circinella) 6. sylvana (Rosellinia) 838. symmetricum (Rhytisma) 1259. Symploci (Homostegia) 628. Symphoricarpi (Griphosphaerioma) 924.

Symphoricarpi (Hymenoscypha) 1184

Sumphoricarpi (Lasiobotrus) 365. Symphoricarpi (Phialea) 1184. Sumphoricarpi (Plowrightia) 924. Symphoricarpi (Rhizogene) 365. Symphoricarpi (Valsa) 711. Synedrellae (Guignardia) 781. Syringae (Phytophthora) 35. Systenae (Laboulbenia) 177.

Tabebuiae (Sphaerella) 854.
Tabernemontanae (Meliola) 266.
Taccari (Sphaerella) 851.
Tachyis (Laboulbenia) 191.
Take (Aciculosporium) 701.
Talaumae (Ceuthocarpon) 1060.
Talaumae (Melanopsamma) 920.
talcophila (Karschia' 1280.
Tamarindi (Meliola) 308.
Tanakae (Capnodium) 383.
Taquarae (Chaetopyrena) 961.
Taquarae (Metasphaeria) 961.
Taquarae (Rhopographella) 622.
tarda (Ophiocarpella) 638.
tarda (Ophiodothis) 638.

tarda (Thyridaria) 770. tardiva (Sphaerella) 887. tasmanica (Cenangella) 1232. tasmanica (Calloria) 1241. tasmanica (Morchella) 1154. tasmanica (Parodiella) 251. tasmanica (Sphaerosoma) 1159. tasmanica (Typhula) 1324. tasmanicum (Helotium) 1182. taurica (Leivellula) 226. tayabense (Dimerium) 255. tayabensis (Asterina) 475. tavabensis (Meliola) 326. tauabensis (Merrilliopeltis) 916. tavabensis (Oxydothis) 916. Tecomae (Meliola) 273. Teesdaleae (Peronospora) 53. tehoniana (Meliola) 275. Tehonis (Phyllachora) 580. Telephani (Supendromyces) 107. Telosmae (Meliola) 271. tenella (Hysterostomella) 410. tenella (Hysterostomina) 410. tenellula (Melanographa) 1283. tenellula (Melaspilea) 1283. tenellum (Hypoderma) 1123. tenuis (Coscinopeltis) 394. tenuis (Morenoëlla) 502. tenuis (Phyllachora) 394, 593. tenuissima (Chaetopeltopsis) 530. tenuissima (Asterina) 530. tenuissima (Coscinopeltis) 394. tenuissima (Melicla) 331 tenuissima (Phyllachora) 394. Teramni (Meliola) 309. Terminaliae (Dothidea) 412. Terminaliae (Polyrhizon) 412. termitarius (Laboulbeniopsis) 220. ternatus (Monoicomyces) 92. terrestris (Phytophthora) 35. tertia (Asterina) 443. tessellata (Hormosphaeria) 1300. Tetradeniae (Meliola) 363. tetraspora (Didymosphaeria) 936. tetraspora (Dothidea) 547. tetraspora (Keithia) 1263. tetraspora (Naevia) 1246.

tetraspora (Massaria) 1005. Tetrazygiae (Guignardia) 788. texana (Laboulbenia) 174. texana (Phyllachora) 589. Thalictri (Didymella) 910. Thaxteri (Cantharomyces) 98. Thaxteri (Chitonomyces) 88. Thaxteri (Dimeromyces) 70. Thaxteri (Labculbenia) 155. Thaxteri (Rhipidium) 29. Theae (Limaoinula) 386. Theae (Phaeosaccardinula) 386. Theae (Phaeosphaerella) 926. Theae (Sphaerella) 888. Theae (Zukalia) 382. Theisseni (Cocconiopsis) 416. Theisseni (Scolecopeltis) 416. Theissenii (Stegastroma) 936. Theissenii (Xylaria) 1102. Theobromae (Botryodiplodia)770 Theobromae (Meliola) 363. Theobromae (Metasphaeria) 960. Theobromae (Nectria) 659. Theobromae (Physalospora) 806. theobromicola (Eutypella) 723. Thesii (Pyrenophora) 1045. thinocharinus (Ecteinomyces) 143. thinocharinus (Corethromyces) 136 Thlaspeos alpestris (Peronospora) 53. Thlaspeos arvensis (Peronospora) 53. Thlaspeos perfoliati (Peronospora) 54. Thujae (Pleospora) 1028. thujina (Keithia) 1263. thujina (Ombrophila) 1235. Tibouchinae (Physalospora) 234. Tibouchinae (Syntexis) 234. tiflisiensis Eutypella) 721. tjibodensis (Discomycella) 1144. tjibodensis (Lanomyces) 365. tjibodensis (Nectria) 663. tijucensis (Bagnisiopsis) 390. Tiliae (Asteroma) 992 Tiliae (Sphaerella) 889. tiliacea (Botryosphaeria) 814.

tiliaginea (Didymella' 911. timbo (Phyllachora) 613. tinctoria (Gibbera) 923. tingens (Sphaerella) 855. tittephora (Laboulbenia) 191. Toddaliae (Meliola) 340. Tomari (Rickia) 80. tomentellicola (Claudopus) 1322. tomentosa (Torrubiella) 691. Tonduzi (Bionectria) 678. Tonduzi (Capnodinula) 371. Tonduzi (Leptosphaeria) 990. Tonduzi (Lisea) 677. Tonduzi (Meliola) 290. Tonduzi (Opasterinella) 487. Tonduzii (Phyllachora) 599. (Pseudophyllachora) Tonduzi 1004. Tonduzi (Stigmatea) 397.

Tonduzi (Stigmatea) 397.
tonkinensis (Phyllachora) 575.
topographica (Anisochora) 610.
topographica (Munkiella) 610.
Tormentillae (Pezizella) 1187.
tornensis (Peronospora) 39.
torpedo (Zignoella) 968.
Torrendi (Hypoxvlon) 1079.
Torrendi (Urnula) 1224.
Torrendii (Endogone) 1319.
torrendiana (Galactinia) 1162.
torta (Meliola) 296.
tortilis (Stigmatomyces) 109.
tortimasculus (Stigmatomyces)

Tortulae (Sphaerella) 880. toruloidea (Meliola) 302. torulosus (Dioicomyces) 104. Trachelospermi (Meliola) 267. trachycarpa (Asterina) 456. Trachypus (Laboulbenia) 204. transcaspica (Cucurbitaria) 1056. transiens (Asterina) 459. transiens (Diaporthe) 757. transiens (Kriegeriella) 432. transiens (Lachnum) 1202. transiens (Phyllachora) 605. transiens (Xylaria) 1099. transvaalensis (Zukalia) 380.

transversalis (Asterina) 465. transversalis (Morenoëlla) 497. transversalis (Physalospora) 804 transversum (Pythiogeton) 1332. Tranzschelii (Physalosporina) 645.

travancorensis (Asterina) 444. traversiana (Guignardia) 780. traversiana (Mortierella) 12. trechiphila (Laboulbenia) 184. Tremae (Meliola) 348. Trewiae (Dictyothyriella) 523. Tricentri (Cordyceps) 700. Trichiliae (Meliola) 320. Trichloridis (Balansia) 697. trichodea (Asterina 371. trichodea (Capnodinula) 371. trichophilum (Synchytrium) 17. trichophila (Sphaerella) 885. Trichostigmae (Linospora) 1061. trichostoma (Chaetopyrena) 961. trichostoma (Metasphaeria) 961. tridactyla (Xylaria) 1096. Trifolii (Phullachora\ 594. Trifolii (Pseudopeziza) 1262. Trifolii (Sphaerella) 874. Trifolii alpestris (Peronospora) 56.

Trifolii tomentosi (Sphaerella) 874.

Trifoliorum (Peronospora) 56. triglitziensis (Dasyscypha) 1203. trigona (Gloniella) 1114. Trigonellae (Pseudopeziza) 1262. trigonospora (Bommerella) 844. trigonosporum (Chaetomium) 844. trigonum (Coccomyces) 1256. trilaterale (Chaetomium) 842. trimera (Micropeltis) 517. trimerioides (Leptosphaeria) 981. trimorpha (Teichospora) 1051. trinidadensis (Ceraiomyces) 140. trinitensis (Eurytheca) 1135. trispora (Blakeslea) 6.

Tristachyae (Phaeodothis) 618. tristica (Diatrype) 724.

tristica (Valseutypella) 724.

tristis (Ceratomyces) 148. tristis (Nitschkea' 776. Triunfettae (Dimerosporium) 478. Triunfettae (Meliola) 313. trivialis (Laboulbenia) 185, Trochicarpi (Sphaerella) 870. Trogophloei (Amorphomyces) Tregophicei (Cantharomyces) 96. Trogophloei (Dimorphomyces) tropica (Lamprospora) 1172. tropica (Plicaria) 1172. tropica (Xvlaria) 1099. tropicalis (Asterina) 449. tropicalis (Endothia) 761. tropicicola (Euantennaria) 363. Trotterii (Phaeosphaerella) 925. Trubini (Phizopus) 9. truncata (Rosellinia, 836. truncatum (Perisporium) 262. truncatus (Chitconomyces) 89. Tsugae (Keithia) 1263. Tsugae (Propolidium) 1263. tubaeformis (Gnomoniella) 708. tuberculata (Lamprospora) 1170. tuberculata (Lamprospora) 1170. tuberculata (Meliola) 355. tuberculatella (Lamprospora) 1171 tuberculatum (Thyridium) 772. tuberculifera (Winterina) 708. tuberculiformis (Plowrightia) 637. tuberculiformis (Syncarpella) 637. tuberculosa (Chorostate) 750. tucumanensis (Laboulbenia) 176. tumefaciens (Dothidea) 636. tumefaciens (Montagnella) 637. tumefaciens (Stalagmites) 636. tumefaciens (Syncarpella) 637. tumida (Coccomyces) 1256. tumidella (Diatrype) 740. tumidum (Myelosperma) 815. tunetana (Guignardia) 792. tunetana (Laestadia) 792. tunicata (Rosellinia) 828. turbinata (Hypocrella) 694. turbinatum (Sarcosoma) 1235.

turfosa (Saprolegnia) 24. turkestanica (Pleospora) 1030. turricula (Gloeopeziza) 1238. Turritidis (Peronospora) 54. tyrocola (Debaryomyces) 1310.

uberata (Phyllachora) 588. uberiformis (Anthostomella) 825. uleana (Microthyriella) 527. uleana (Phyllachora) 589. uleana (Physalospora) 589. Ulei (Apiosphaeria) 919. Ulei (Dothidella) 919. Ulei (Melanopsammopis) 919. Ulei (Stigmochora) 613. Ulicis (Orbilia) 1238. Ulmariae (Synchytrium) 18. ulmicola (Calosphaeria) 709. ulmicola (Leptosphaeria) 1001. ulmicola (Pleosphaerulina) 1020. ulmicola (Rehmiella) 1074. Ulothii (Didymella) 907. Umbellatarum (Cenangium) 1227. umbilicata (Phyllachora) 594. umbilicata (Rosellinia) 835. umbilicatum (Myiocopron) 422. umbonatus (Dioicomyces) 105. umbrina (Diaporthe) 755. umirayensis (Meliola) 322. Uncariae (Amerodothis) 539. Uncariae (Bagnisiella) 539. Uncariae (Meliola) 336. unciger (Corethromyces) 135. uncinata (Balladyna) 374. uncinata (Rickia) 80. uncinatus (Dioicomyces) 104. uncinulatus (Chitonomyces) 90. undulata (Mollisia) 1191. undulatus (Polyporus) 1322. Unedinis (Sphaerella) 861. Unguadiae (Sphaerella) 1334. unicolor (Acetabula) 1158. unicolor (Tuber) 1153. unicornis (Laboulbenia) 178. unicuspidata (Monosporella) 1315. unilateralis (Monoicomyces) 92. Unteri (Pyrenopolyporus) 1092.

uralense (Célidium) 1299. uralense (Helotium) 1183. uralensis (Perrotiella) 1209. uralensis (Valsa) 715. urceolata (Conida) 1296. urceolata (Nummularia) 1091. urceolus (Godronia) 1233. Uredo (Belonidium) 1213. urophylla (Phyllachora) 563. urophyllum (Catacauma) 563. Uropodae (Rickia) 80. Urostigmatis (Metasphaeria) 956. Urticae (Xyloma) 1259. urvilleana (Vizella) 1021. Usamii (Rhizopus) 8. Usterii (Ophiocapnodium) 388. utahensis (Chorostate) 749. utriforme (Pythiogeton) 1332. Uvariae (Meliola) 265. Uvariae (Meliola) 362.

vacciniicola (Dothidella) 545. Vaccinii (Dothidella) 635. Vaccinii (Sphaerella) 861. Vacciniorum (Scleroderris) 1233. vagabunda (Micropeltis) 518. vagans (Lasiosordaria) 847. vagans (Xylaria) 1101. valbyensis (Hanseniospora) 1307. valdivianus (Cantharomyces) 96. valdivianus (Corethromyces) 133. Valerianae (Pyrenopeziza) 1197. valesacea (Peronospora) 55. valida (Laboulbenia) 174. valsiforme (Catacauma) 551. valsiformis (Chorostate) 748. valsiformis (Diaporthe) 748. valsiformis (Phyllachora) 561. valsoidea (Chorostate) 748. vancouverensis (Protoventuria) 938. Vanderystii (Hysterographium) 1121. Vanderystii (Melicla) 314. Vanderystii (Phyllachora) 582. Vanillae (Ascospora) 778. varia (Meliola) 353.

varia (Metasphaeria) 951. variabilis (Coccidophthora) 1018. variabilis (Laboulbenia) 205. variabilis (Nectria) 658. variabilis (Peronospora) 39. variabilis (Philonectria) 1016. variabilis (Saprolegnia) 23. varians (Celidium) 1297. varians (Mucor) 4. varians (Stigmatomyces) 114. varians (Xvlaria) 1096. vastatrix (Dioranotropis) 1321. velata (Diatrype) 741. Veliae (Laboulbenia) 169. veneta (Apiognemenia) 707. veneta (Plectodiscella) 1141. venetus (Cantharomyces) 95. venetus (Hydraeomyces) 91. venetus (Monoicomyces) 93. ventricosa (Laboulbenia) 195. ventricosus (Stigmatomyces) 113. ventriosus (Ceratomyces) 149. venusta (Asterinella) 479. venustula (Valsa) 712. Verae-crucis (Asterina) 231, 456. Veratri (Sphaerella) 875. vermifera (Melaspilea) 1292. vermifera (Mycobacidia) 1292. verna (Peronospora' 60. vernicosa (Trabutia) 556. vernoniicola (Phyllachora) 568. Veronicae (Diaporthe) 759. Veronicae (Gnomoniella) 1070. Verrucariae (Nectria) 658. verrucosa (Barlaeina) 1168. verruculosa (Anthostomella) 821. verruculosa (Pharcidia) 894. verruculosa (Sordaria) 845. verruculosum (Eurotium) 227. verruculosus (Stigmatomyces) 121 verrucifer (Conethromyces) 135. verrucosporus (Ascophanus) 1218. verticalis (Dimorphomyces) 74. Verticillium (Peristomium) 229. vesicata (Phyllachora) 602 Vestergrenii (Naevia) 1245. vexans (Olpidiopsis) 16.

vexans (Saprolegnia) 24. vexans (Sphaerėlla) 880. Viburni (Chorostate) 748. Viburni (Meliola) 275. Viburni (Systremma) 548. Viciae (Olpidium) 15. Viciae-sativae (Peronospora).56. Vleugelii (Pseudopeziza) 1262. vignicola (Uromyces) 17. vile (Acanthostigma) 972. vilis (Coccomyces) 1257. vilis (Hypocrella) 693. vilis (Meliola) 349. Villaresiae (Pycnoderma) 434. vinosum (Nematothecium) 392. violacea (Byssonectria) 676. violacea (Othidea) 1161. Violae (Pleosphaerulina) 1020. Violae (Septoria) 892. Violae (Sphaerella) 892. violascens (Ombrophila) 1238. Virgaureae (Sphaerella) 857. virginiana (Endothia) 761. virginiana (Endothia) 760. virgultorum (Dothidea) 751. virgultorum (Helotium) 1183. viridari (Physalospora) 807. viridescens (Hypoplegma) 252. viridescens (Parodiopsis) 252. viridis (Exoascus) 1300. viridispora (Dothidea) 541. viridula (Nectria) 652. Visci (Anthostoma) 744. vistulensis (Peronospora) 41. Vitalbae (Massarinula) 913. Viticis (Meliola) 351. viticola (Cryptosporella) 743. vitrea (ljuhya) 666. viventis (Phragmocauma) 621. viventis (Phyllachora) 621. Vlachii (Didymella) 903. Vogelii (Pezizella) 1186. vogesiaca (Sphaerella) 871. Vrieseae (Echidnodes) 498. Vrieseae (Lembosia) 498. Vrieseae (Micropeltis) 498. vulgare (Clypeolum) 513.

vulgaris (Dictyopeltis) 513. vulgaris (Gnomonia) 708. vulgaris (Laboulbenia) 183. vulgaris (Pleospora) 1025. vulgata (Phyllachora) 580. vulgatissimus (Dimorphomyces) 73

Waghornei (Melanopsamma) 921 Walsurae (Microcyclus) 544. wandelensis (Didymosphaeria) 933. warburgiana (Epichlöe) 696. Washingtoniae (Sphaerella) 881. Wattii (Dimerium) 256. Weigeliae (Botryosphaeria) 811. weiriana (Propolis) 1245. weiriana (Sphaerella) 863. weiriana (Rosellinia) 827. Weirii (Propolis) 1244. Weissii (Leciographa) 1291. wettsteiniana (Taphrina) 1303. wildemaniana (Plasmopara) 64. Willi (Pseudosaccharomyces) 1309. Winkleri (Phyllachora) 583. winteriana (Asterinella) 487. winteriana (Leprieurina) 487. winteriana (Nitschkea) 776. winteriana (Prillieuxina) 487. Wistariae (Eutypella) 720. Withaniae (Didymella) 910. wombalensis (Meliola) 297. Woroninae (Diaporthe) 750. woronowiana (Teichospora) 1047 Wrightiae (Meliola) 268. Wrightii (Perisporiopsis) 261. Wulfenii (Gnomonia) 1073.

xanthocephala (Physalospora) 800. Xantholini (Chantransiopsis) 216. Xantholini (Corethromyces) 136. xerophila (Chaetopyrena) 961. xerophila (Mollisia) 1192. xerophila (Pleospora) 1029. xylophilus (Ascobolus) 1223.